CCAAACCCAG CTATCAACCC CATAAAGATA AAAAGAATGG TCTACTAAGC AAGCTTCCTT 7440

CCTCTGATTT TCAAACAAAA ATCTCTCATT GCTTACATTG TTCTCTCAAG CTTATTGGTC 7500

ACTATTATCA ATATAGGTGG TTCTTACTAT CTCCAAGGAA TCTTGGATGA ATACATTCCA 7560

AATCAGATGA AATCAACTTT AGGAATCATC TCAGTTGGTC TGGTTATCAC CTATATCCTC 7620

CAACAAGTCA TGAGCTTCTC CAGAGATTAT CTCCTAACCG TTCTGAGTCA GAGATTAAGT 7680

ATTGATGTGA TTTTATCCTA TATTCGCCAT ATTTTTGAAC TTCCCATGTC TTTCTTTGCG 7740

ACACGTCGTA CAGGAGAAAT CATTTCACGA TTCACAGATG CTAACTCTAT TATAGATGCC 7800

TTGGCTTCTA CCATTCTTTC TCTTTTTCTG GATGTTTCTA TTCTGATTCT TGTAGGAGGC 7860

GTCTTACTGG CACAAAACCC TAATCTCTTC CTTCTTTCTC TTATTTCCAT TCCTATATAC 7920

ATGTTCATCA TCTTTTCTTT TATGAAACCT TTCGAAAAAA TGAACCATGA TGTCATGCAA 7980

AGTAATTCTA TGGTTAGCTC TGCCATTATC GAAGATATCA ACGGGATTGA AACTATAAAG 8040

TCGCTCACGA GTGAAGAAAA TCGCTATCAA AATATAGACA GCGAATTTGT AGATTATTTG 8100

GAAAAATCCT TTAAGCTCAG TAAATATTCT ATTTTACAAA CGAGTTTAAA GCAGGGAACA 8160

AAATTAGTTC TGAATATCCT TATCCTATGG TTTGGCGCTC AATTAGTCAT GTCAAGTAAA 8220

ATTTCTATCG GTCAGCTGAT TACCTTTAAC ACACTTTTTT CTTACTTTAC AACTCCTATG 8280

GAAAATATTA TCAACCTCCA AACCAAACTC CAATCTGCGA AGGTCGCTAA TAACCGTTTG 8340

AACGAAGTCT ATCTAGTCGA ATCTGAATTT CAAGTTCAAG AAAACCCTGT TCATTCACAT 8400

TTTTTGATGG GCGATATTGA ATTTGATGAC CTTTCTTATA AGTATGGTTT TGGATGAGAT 8460

ACCTTAACAG ATATTAATCT CACGATTAAA CAAGGAGATA AGGTTAGCCT AGTTGGAGTT 8520

AGTGGTTCTG GTAAAACAAC TTTAGCCAAA ATGATTGTCA ATTTCTTTGA ACCCTACAAA 8580

GGGCATATTT CCATCAATCA TCAGGATATT AAAAACATTG ATAAAAAAGT CTTGCGCCGT 8640

CATATTAATT ACCTACCCCA ACAAGCCTAT ATCTTTAATG GCTCTATTTT GGAAAACTTA 8700

ACCTTGGGCG GTAATCATAT GATTAGTCAA GAAGATATTC TAAAAGCTTG TGAAGTAGCT 8760

GAAATCCGTC AAGACATTGA AAGAATGCCT ATGGGCTATC AAACTCAGCT CTCTGATGGA 8820

GCTGGTCTAT CAGGAGGACA GAAGCAACGA ATCGCTCTCG CTCGTGCTCT TTTAACTAAA 8880

TCTCCTGTTT TAATACTAGA TGAAGCTACT AGCGGTCTTG ATGTCTTGAC TGAGAAAAAG 8940

GTTATAGATA ATCTTATGTC TCTAACTGAT AAAACCATTC TCTTTGTAGC CCATCGTCTC 9000

AGTATAGCCG AACGAACCAA CCGTGTCATT GTTCTTGACC AGGGGAAAAT CATTGAAGTT 9060

GGTA 9064

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7780 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

CTCCATTTTT TTGATTTCAT AAATAAACAA CCTCTCTGTT AATTTTGTAT AATTATAACG 60

ATATCCAAGT TACTTGTCAA GTGTTTTTTA AATTTTTATC TCAAAAATAT TTTTTCGTTC 120

AAAAAAAGGA GCCATCAGTT GATTTCAAGC TCCCTTTTAT ACAGAATTAA ACTATTTTAT 180

AGTTCGACAA TCTTACCTGT TTCAAAGTAG ACAACCCATT CACAGATATT TTTAGCATAG 240

TCACCGATAC GCTCCAAGTA GGAAATAACT TGGAAATAAT CACGACCCGT AACAATGGCT 300

TCTGGATTTT TCTTAATCTC TTCAGTCGCA AGGTCACGGA TAGTTTCAAA ATAGTGGTTA 360

ATTTGCTCAT CCATGGAGGC CACCCGGTAT GCGTCGTCAA CAGAACCATT AAGATAAAGA 420

TCAAGTGCTG CTTCCACAAC GCTTTTAACT TCACGTCCCA TTTTTTTAAT TTCTTCCTCT 480

ACAGCTGGAA TGCGCTCTTC CCCCTTCATA CGGATGGTTG CCTGGGCAAT GGCTACAGCG 540

TGATCCCCCA TACGCTCCAC ATCTGATACA GCCTTAAGGA CAGTCAAGAC TGTACGCAAA 600

TCTTGAGAGA CTGGTTGTTG GAGTGCGATC ATTTCAAATG ATTTCTTTTC CAGTTTCACT 660

TCGTATTCAT TTACTTCTGC ATCATCTTCG ATGACCTCTT TTGCCAGGTC ACGGTCATGC 720

GTGACAAAAG CACGTACCGT ACGATTGATT TGTGAGAGCA CTTCTTGTCC CATAGCGTAG 780

AACTGGTTAT GTAATTTCTC TAAATCTTCT TCAAATTGAG ATCGTAACAT CTTTCATCTC 840

CTTATCCAAA TTTTCCTGTA ATATAGTCTT CCGTTTCCTT GTGTTGGGGA TCAAGGAACA 900

TCTGCTTGGT ATCATTAAAT TCAATCAAAT CTCCATCTAG GAAAAATCCT GTCTTATCAG 960

AGATACGTGA AGCTTGCTGC ATGGAACGGG TTACCAGAAG CATGGTGTAC TTGTCTTTTA 1020

GACCATACAA GGTTTCCTCA ATTTTACCAG CTGAAATCGG ATCCAAAGCC GAAGTTGGCT 1080

CATCCAAGAG GATGATTTTA GGACTAGTTG CCAAGACACG GGCCACGCAG ACACGCTGCT 1140

GTTGACCACC TGACAATCCA ATAGCTGAAT CATATAGACG ATCCTTGACC TCATCCCAGA 1200

TAGAGGCACC TTGCAAGGCT TTTTCTACGG CTTCATCCAG AACCTGCTTA TCCTTAATTC 1260

CATTGATACG AAGCCCGTAG ACAACATTCT CATAGATAGT CATAGGGAAA GGATTAGGTT 1320

GTTGGAAAAC CATTCCGATT TCCTTACGTA ATTCAACCGT ATCTGTACGC GGACTGTAGA 1380

TGTTGTGACC ATTGTACACC ACGGATCCAG TTGTGGTCAC CTCTGGATTG AGATCTCCCA 1440

TGCGGTTGAG AGACTTGAGG AGGGTTGACT TCCCTGATCC AGATGGACCA ATCAAGGCTG 1500

TAATTTCCTT AGGTTGGAAA GATAGGGAAA CACTATTCAA AGCCTTCTTT TTATTATAAT 1560

AAACGGACAG GTCTGATACC TGTAAAATCG CATCTGTCAT ACGGTTTCCT TTCTAACCAA 1620

AGTGACCAGA TACATAGTCA TTGGTGGACT GTAGCTTGGC ATTTTGGAAA ATAGTTGCAG 1680

TCTTGTCATA CTCAATCAAA TCACCCAAGT AAAAGAAGCC TGTATAGTCA CTTGCACGAG 1740

CAGCCTGCTG CATATTATGC GTTACAATGA TGATGGTAAA GTTTTTCTTG AGCTCAAACA 1800

TGGTCTCTTC TAGTTGCATG GTCGCAATCG GATCCAAGGC TGAGGCTGGC TCATCCATTA 1860

AGAGGATATC TGGCTTAACA GAGATGGCAC GAGCGATACA GAGACGTTGT TGCTGACCAC 1920

CTGATAAGGT CAAGGCTGAC TTGTGGAGAT CGTCTTTAAC CTGATCCCAG AGGGCAGCCT 1980

GACGAAGGGA GGTTTCTACG ATTTCATCTA GGACTTGCTT ATCCTTAACT CCAGCACGTT 2040

CATGCGCAAA GGTAATATTA CGGTAAATTG ACTTAGCAAA TGGATTGGGA CGTTGAAAAA 2100

CCATTCCAAT GTGTTTACGC ATTTCATAAA CGTTGATTTC TGGACGGTTG ACATCAATTC 2160

CACGATAGAG AATCTGCCCA GTTACTTTAG CAATATCAAT AGTATCATTC ATGCGATTGA 2220

GACTGCGTAA GTAGGTAGAT TTCCCCGATC CCGACGGGCC AATCAAAGCT GTAATTTTAT 2280

TTCTTTCAAA TTGCATATCA ATCCCCTTAA TGGATTCATT TTTACCATAG TAAACATGGA 2340

CATCCTTAGT AGAAAGGGCT ACTTTTTCTT CAGGAAAGGT AAGGATATGC TTCTCATCCC 2400

AGTTATATGT TGACATGGCT TCTCCTTTAG GCAGCGGTTA ATTTCTTGTG TAGATAGCTT 2460

CCGAACTTAC GAGCTCCAAA GTTAAAAATC AGGATAAAGA TCAGGAGCAC AGCGGCAGAA 2520

CCTGCTGATA CAATGGTTCC ATCTGGAATA GTGCCTTCAC TATTGACTTT CCAGATATGG 2580

ACAGCCAAGG TTTCTGCTTG ACGGAAGATA GAGATGGGGC TAGTCACACT GAGGATATTC 2640

CAGTTAGACC AGTCAAGAGC TGGCGCCGAT TGCCCTGCTG TATAGATCAG AGCTGCAGCT 2700

TCGCCAAAGA TACGACCAGA TGCCAAGACG ACACCCGTTA CAATACCTGG AAGCGCTTCC 2760

GGAATAACAA CATGAACCAC TGTCTCCCAG CGAGAAATCC CAAGAGCCAG ACCAGCCTCA 2820

CGTTGGGTAT GGTGAACGTG TTTCAAACTA TCCTCTACAT TACGCGTCAT CTGAGGCAAG 2880

TTAAAGACTG TCAAGGCCAA GGCACCTGAA ATGATTGAAA ATCCATACTC AAACTGGACT 2940

ACAAAGATCA AGTAACCAAA GAGACCCACC ACCACTGATG GTAAAGAGGA CAAAATTTCA 3000

ATACAAGTCC GCACAAAGTT GGTAACAGGA CCTTTTTTAG CATATTCAGC CAAGTAAATC 3060

CCAGCTCCCA TAGAAAGAGG TACAGAAATA ATCAAGGTAA TGACCAATAG GAAAAAGGAA 3120

TTGTAAAGCT GAATGCCAAT CCCACCACCT GCTTGAAAAG CAGAAGACCT TCCAGTCAAG 3180

AAAGACCAAG AGATATGGGG CAAGCCCCGA ACCAAGATAT AGAGAATCAA GGAAGCCAAG 3240

ATTGTCACAA TGATGCTAGC AATCGTATAG AGGACAGCTG TTGCAAGTTT ATCTAATTTC 3300

TTAGCGCGCA TAATTTTTCT TTCCTCTTTC TTTCGTAATC AATTTAATCA CACTGTTAAA 3360

AACTAAGCTC ATCAAGAGCA GTACCAAGGC CAGTGACCAG AGAACATTAT TATTTACAGT 3420

TCCCATGACA GTGTTCCCAA TTCCCATAGT TAATATAGAA GTTAAAGTTG CAGCTGGTGT 3480

GGTCAAGGAA GTTGGGATAA CAGCTGAGTT TCCGACAACC ATCTGGATAG CTAGAGCCTC 3540

ACCAAAGGCA CGCGCCATCC CAAAGACCAC TGCAGTGAAA ATACCAGAAC GGGCCGCCTT 3600

CAAGATCACA CGCCAGATAG TCTGCCAGCG AGTGGCTCCC ATAGCGAAAC TGGCTTCACG 3660

ATAATAACGA GGAACCGCAC GCAAGCTATC CGTTGTCATA AAGGTTACGG TCGGCAAAAT 3720

CATGACAAAG AGGACGGAAA TCCCTGACAA AATCCCAAAA CCAGTCCCAC CAAAGACACT 3780

GCGAACAAAG GGAACGACGA CTTGCAAGCC AATAAATCCG TACACTACTG AAGGAATCCC 3840

AACCAGGAGT TCAATAGCTG GTTGCAAAAT CTTCGCCCCT TTTGGTGATA CTTCGGTCAT 3900

AAAAACTGCT GCACCAATAG CAAAGGGTGT TGCGATAAGG GCTGAGAGAA TGGTAACGAT 3960

AAAGGAACCC AAAATCATAG GAAGGGCACC AAATTCTTTA CTAGAAGGAT TCCAAGTTCC 4020

TCCCAAAAGA AAGTCAAAGA TATTCACACC ATTGACAAAG AAGGTCGACA AGCCTTTTTG 4080

CGCTACGAAA ACCAAAATCA TGGCCACAAG GATGACTATC AAAGAAAGAC AGGCAAAGGT 4140

CAAACCTTTT CCTAATTTCT CCAGACGAGA ATTCTTTGAT GGAAGCAACA TTTTCTTAGC 4200

TAATTCTTCT TGATTCATTA TTGTCTCCCT TCCAACACTG TCACAGTTCC GGCAGCATCT 4260

TTTTCAACCT TCATTTCCTT AATCGGAATA TACTTCAATC CTTTGACAAT CCCTTCTTGG 4320

GTCTCATCCG AGAGAACAAA ATTGAGAAAT TCTGCAGCCA ACTCATTGGG CTGCCCCAAT 4380

GTATACATAT GCTCATAAGA CCACAAGGGC CAATTATTGC TACTTATATT TTCTGGACTT 4440

AAGTCATAGC CATTCAACTT CATGCTTTTG ACCGAATCAT CTATATAGGT AAGAGATAAA 4500

TAAGAGATAG CTCCTGGACT TTTTGATACG ATTGATTTTA CCGCTCCATT TGAATCCTGC 4560

TCCTGACTTT GCATGGCAGA CTGACCTTCC ATAATGACAG TATCAAAGGT AGCACGAGAG 4620

CCAGAGCCGG CTGCCCGATT GATAACAGAG ATGGGTAAGT CCTTACCACC AACCTCTTTC 4680

CAATTGGTTA CCTCACCTAT GAAGATTTGA CGAAGTTGCT CTGTCGTTAG GTTATCAACA 4740

TCAACCTCCT TATTGACAAT CAGAGCCAAG CCAGCTACCG CGACCTTGTG GTCAACAAGA 4800

GCAGAAGCAT CAATTCCGTC TTTTTCCTCA GCAAATACAT CTGAGTTTCC TATATCAACT 4860

GCCCCAGACT GAACCTGGGA CAAGCCTGTA CCAGAACCTC CCCCTTGGAC ATTGACCGTT 4920

TTTCCAACAT GGATCGTGCC AAATTCATCT GCCGCTACTT CAACCAAGGG. TTGCAAGGCA 4980

GTTGAGCCAA CAGCCGTTAT GGATTCTCCA CGATCAATCC AGCTAGCACA GCCTACTAAA 5040

CAAGCCGTCA GCCAAAAAGC GATAAGAGAC AGAGCAAGCT TTTTTCTTTT TTTCACTGTT 5100

TTTCTCCTCG AAAATAATTA TGAATACTGT GAATTTTTTA AGTAGTTCTT TATGAGTTGA 5160

CGCATGAATT CTTACCAAAT TTCTGCGCAA TTGATTATTT ATATAATATA GGCTATATTA 5220

CTCTTTCCTA ACCTCCTTTT TTCATATGTG GATAAAATCT CTTGTCTATC CCTTCCCCCA 5280

TTGTCACCCA TTATAGTCAT TTCGTGTCTC TTTTTCCCCT TTTTAATGCA AGGGAAATTA 5340

CTCTCCTTAG ATGATAATCC AAAAGCTAGA AAGGTATCTC AAACCTCTCT ACTCTCCCAG 5400

ACTAGTTTAC AACTAAAAGG AAAAGATTCT ATTTTATGAG AAATCTAGTT TACAAGCGGT 5460

AAGAACGCTA ATAACTAAAC TTCTTGTACT CTTTGAAAAT CTCTTCAAAC CAGTGTTTTG 5520

AGCTATCTAT GGCTAGCTTC CTAGTTTGCT CTTTGATTTT CATTGAGTAG TAAAACTACA 5580

TGTAATGGCA ATCAAGATAT CAAGAATCAT CCTACTAAAA AAATCCATAC TTTCACTATA 5640

ACATAGAATA AGATATTTGA CTAGCATTTT CATTTGAATC TGAGGCCTTT TGGAAAATAA 5700

TTTTTCAAAA CATTTCCAGT AACCTTTGCA AAGCCCAAGC CATTGCCTTT AACCAAAACT 5760

TGGTACCAAC CATTTGGCAG ACTTTCTGCC AGCTGAACGG TTTCTCCAGC CGCATACTTG 5820

ACAAACGCTT CTTGGCCAAT TTCAACCGAC TGTTCGACCT GACTCGGTTT CAAGGCTAAA 5880

CCAAGAGCGA AACTGGGCTC AAAGCGTTTC TTCTTAAAAG TACCCAGATG CAGTCCATTG 5940

CGAGCAATCT TGAGCTTCCA TAAATCTGGC AAAAGTTCTG GCAAGAGATA AAGCTGGTCT 6000

CCAAAAATCT GCAAGATACC CGGTAGATTG ACCTTCAAAT GGTTTTGGGC AAATTCCTGC 6060

CACAAGGCAA CTTGTTCACG GCTGAGGTTA CTCTTACTTG CCTTAAATTT AGGAGCTGGA 6120

TTGTTACCCT TAAACTGTAG ATGGGCAACA AACTGACCCT CTCCCTTAAA CTGATGAGGA 6180

TACATCCGAG CCGTTTCTGG CAGGTCAATA CCAGCTACCA TTCCATTGAT ATGCTCTACT 6240

GGCAACAAGT CAAAATCATA CTCTTCCAGC AACCAATTGA CAATCTCTTC GTTTTCCTCG 6300

GGTGCCCAGG TACAGGTCGA ATAAACCAGA TGACCACCTT CAGCTAACAT GGTCACTGCA 6360

TCCTCCAGAA TTTCTCTTTG CAAGCTAGCA CATTGACTCG GATAATCTAA GCTCCAATAG 6420

TCCATAGCAT CAGGTTGCTT ACGAAACATT CCTTCACCAG AGCAAGGGGC ATCAAGAACG 6480

ATTAAGTCAA AATAGCCTTT AAAGACCTTG ACCAAGCGGT CGGCAGATTC ATTGGTCACC 6540

ACGACATTTG TCGCTCCAAA ACGCTCCATG TTTTCAACCA AAATCTTAGC CCGTTTGCTT 6600

GAAATTTCAT TGGAAnCAAG TAGCCCCTCC CCTGCTAGAT AGGCTGCCAG TTGAGTTGAT 6660

TTGCCCCCCG GTGCAGCAGC CAAGTCCAAG ACCTTCATAC CAGGACTGGG TTGGGCTACT 6720

TGAGCCACCA TTTGAGCAGC AGGTTCTTGC GAATAAACTA AACCTGTAGC ATGCTCAGGC 6780

GATTTCCCTG AAACCTTCCC ATAGTGGCCC CAAGGGGTTT GAGTAATGGC ATCAGAAAAG 6840

GAAAGTTGCT CTTCTTTTAA GGGATTGACC CGAAAGGCCG AAACCGCTTC CTCCTCAAAA 6900

GAGGCAAGAA AATCTCTTGC CTCATCTCCT AGTATCTCTT TATATTTTTC AACAAATCCT 6960

TCTGGAAATT GCATTTAAGT TCTTTTCCTT TCGTAAATAT AGGACTGAAT TTCCTCCTGC 7020

ATCTCAAGAG GCACCATCAT GACCGGCTGT CTGGTTTGAA AATCAGGAGC TTCACCAAAA 7080

AGGGTCACAA CCCGATAGCC CAGACTTTCC CCTAAAATAC TAGCTGCGGC ATAATCCCAT 7140

GGTTGCAGAT AAGTGAGATA GGTCAACAAA CGCCCTGACA AAATCTTGGC AAAACTAATG 7200

GCCGCACTTC CATAGACACG AACACCAAGA ACCGCTCGGC TCAAATCAGC CAGCCCCCAT 7260

TCATTGGTTT CCAGCATACC ACTATTCCCT GCAATGAGAA AATCTCCAAG TGGTTTAGTT 7320

TTAAAAGGAG CTAGGGACCT ATCATTTAGA CAAACTGGAA ATTCCCCACC ACCGTGGTAA 7380

CAATCCCCTT TGACCACATC ATAAATCAGA CCAAACTGTC CCTGACCATT TTCAAAATAA 7440

GCCATCATAA CAGCAAAATC TTCCTGCTGG GCTACAAAAT TATTGGTACC ATCAATGGGA 7500

TCAATGACCC AAACCTTGCC CTCTTGAACC GAGGCTCGCA GACAACCTTC TTCAGCACAA 7560

ATCTTATCCT CAGGATAACG GGACAAAATC TCACCAACCA AGAGTTCCTG AACTTCTTTG 7620

TCCAGTCTGG TCACCAAATC TGTTGGAGAG GACTTGGTTT CAACACGCAA GTCTTCCTGC 7680

ATATGGTCAA GAATGTACTG ACCTGCTTTC TTAACAAGCT CTTTAGCAAA TTCAAATTTA 7740

CTTTCCAAGA GAAATCTTTC CTTCCCCTTT TTCTTTGGGG 7780

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4820 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

GTAATGATAT AGGAACACCA GGTGACCTGA TGGGACGTCG TAAGCCTATG AACTACTAGC 60

TGCTAAAGGC TTTAAAGATG GTATGGTACC ATATATCTCA AACCAATACG AAGAAGAAGC 120

CAAACAAAAG GGCAAGACAA TCAATCTCTA CGGTAAAACA AGAGGTTTGG TTACAGATGA 180

CTTGGTTTTG GAAAAGGTAT TTAATAACCA ATATCATACT TGGAGTGAGT TTAAGAAAGC 240

TATGTATCAA GAACGACAAG ATCAGTTTGA TAGATTGAAC AAAGTTACTT TTAATGATAC 300

AACACAGCCT TGGCAAACAT TTGCCAAGAA AACTACAAGC AGTGTAGATG AATTACAGAA 360

ATTAATGGAC GTTGCTGTTC GTAAGGATGC AGAACACAAT TACTACCATT GGAATAACTA 420

CAATCCAGAC ATAGATAGTG AAGTCCACAA GCTCAAGAGA GCAATCTTTA AAGCCTATCT 480

TGACCAAACA AATGATTTTA GAAGTTCAAT TTTTGAGAAT AAAAAATAGT GTCTACTATT 540

AGGAAATAAA GTTTAAAAAG GTGATGAAGA ACAAACCAAG ATTCAAGCAG GAATTCCTAC 600

TGATAATGAA GTAAGTTATG ATCTTATTTA TCAGCAGGAA ACTCTTCCTG CAACAGGTTC 660

ATCAACTTCT GAGCTTACAG CTTTAGGCCT ATTAGCTGTT GGTAGTTTAG TTCTTTTGGT 720

TCATAATATG ACGGGAACAG TTTTTTGCTC CCTCTGAAAA GTCATCATTT GATGGCTTTT 780

TTCTATATAG GGTAAAAGAT AGGGTAAAAG GCTATCATCG GACAAAATAA AGAAGGCATG 840

ATATAATATA AAGTAGATTT CTATGTCATA AAACAAGAAC TGTTTGGACA TCATTCATTT 900

GAAAACTCTC TATGTTCAAA CAATAGTAAA ATAAAATAGG GGATCTAAAT CCTTGCTATG 960

AAAGGAAAAA ACTCAATGGC TACTATTCAA TGGTTTCCTG GTCACATGTC TAAAGCTCGT 1020

CGACAGGTGC AGGAGAATTT AAAATTTGTT GATTTTGTGA CGATTTTAGT AGATGCACGC 1080

TTGCCTCTAT CTAGTCAAAA TCCTATGTTG ACCAAGATTG TTGGTGATAA ACCAAAACTC 1140

TTGATTTTAA ACAAGGCCGA CTTGGCTGAT CCAGCAATGA CCAAGGAATG GCGTCAGTAT 1200

TTTGAATCAC AAGGAATCCA GACGCTAGCT ATCAACTCCA AAGAGCAAGT GACTGTAAAA 1260

GTTGTAACAG ATGCGGCCAA GAAGCTCATG GCTGATAAGA TTGCTCGCCA GAAAGAACGT 1320

GGGATTCAGA TTGAAACCTT GCGTACTATG ATTATCGGGA TTCCAAACGC TGGTAAATCA 1380

ACTCTGATGA ACCGTTTGGC TGGTAAAAAG ATTGCTGTTG TTGGAAACAA GCCAGGGGTC 1440

ACAAAAGGTC AACAATGGCT TAAAACCAAT AAAGACCTGG AAATCTTGGA TACACCGGGG 1500

ATTCTCTGGC CTAAGTTTGA GGATGAAACT GTTGCACTTA AGTTGGCATT GACTGGAGCT 1560

ATCAAAGACC AGTTGCTTCC TATGGATGAG GTTACCATTT TTGGTATCAA TTATTTCAAA 1620

GAACATTATC CAGAAAAGCT GGCTGAACGC TTCAAACAAA TGAAAATTGA AGAAGAAGCG 1680

CCTGTGATTA TTATGGATAT GACCCGCGCC CTCGGTTTCC GTGATGACTA TGACCGTTTT 1740

TACAGTCTCT TCGTGAAGGA AGTCCGTGAT GGCAAACTCG GTAACTATAC CTTAGATACA 1800

TTGGAAGACC TCGATGGCAA CGATTAAAGA AATCAAAGAA TTCCTTGTGA CAGTCAAGGA 1860

GTTAGAAAGC CCTATTTTTT TAGAGCTTGA AAAGGATAAT CGCTCAGGAG TTCAAAAGGA 1920

AATCAGCAAG CGTAAAAGAG CCATTCAAGC TGAATTAGAT GAAAATTTGC GCTTGGAATC 1980

CATGCTTTCT TATGAAAAAG AACTTTATAA GCAAGGATTG ACCTTAATTG CAGGTATTGA 2040

TGAGGTTGGT CGTGGTCCTC TTGCTGGTCC TGTAGTCGCT GCGGCCGTTA TTTTATCTAA 2100

AAATTGTAAG ATTAAAGGTC TCAACGACAG CAAGAAAATT CCTAAAAAGA AACATCTGGA 2160

GATTTTCCAA GCCGTTCAAG ACCAAGCCTT GTCGATTGGA ATTGGTATCA TAGATAATCA 2220

GGTCATCGAC CAAGTCAACA TCTATGAAGC AACCAAACTA GCCATGCAAG AAGCAATCTC 2280

CCAGCTCAGC CCTCAACCAG AGCACCTTTT GATTGATGCC ATGAAACTGG ACTTGCCCAT 2340

TTCACAAACC TCCATTATCA AAGGAGATGC CAACTCCCTC TCTATCGCAG CAGCATCTAT 2400

AGTAGCCAAG GTAACACGTG ATGAATTGCT GAAAGAATAC GATCAGCAGT TCCCTGGCTA 2460

TGATTTCGCT ACTAATGCAG GATATGGCAC AGCTAAACAT CTGGAAGGCC TCACAAAACT 2520

AGGAGTTACC CCAATTCACC GAACCAGCTT TGAACCCGTT AAATCACTGG TTTTAGGTAA 2580

AAAAGAAAGT TAATTGAAAG GAAATAACAT GGAGGAACAG TCGGAAATAG TCCGTTCTAA 2640

GAAAGAATTC GCCTTTGCAT CCAGCACTAT ACTATCCCAA GTTGGTCGAG GAATCATTGT 2700

CGGCCTCATC GTTGGAATTA TCGTCGGATC CTTTCGTTTC TTAATTGAAA AGGGCTTCCA 2760

CCTGATACAA GGAGTTTATC AAGATCAAGG GTACTTAGTG CGCAATCTTT TTGTACTGGT 2820

TTTGTTTTAT ATACTCATCT GTTGGCTCAG TGCCAAACTA ACACGGTCAG AAAAAGATAT 2880

TAAAGGCTCA GGAATTCCTC AAGTCGAAGC CGAACTGAAA GGCCTCATGT CCCTCAACTG 2940

GTGGGGCATT CTTTGGAAAA AATATGTGCT AGGTATTCTT GCTATTGCCA GTGGACTCAT 3000

GCTGGGTCGA GAGGGACCCA GCATTCAACT TGGAGCAGTT GGTGGTAAAG GAATTGCCAA 3060

GTGGCTCAAA TCCAGTCCAG TAGAGGAACG TTCCTTGATT GCCAGTGGAG CTGCAGCAGG 3120

TTTAGCCGCA GCCTTTAATG CTCCTATTGC AGCACTTCTC TTTGTTGTAG AAGAAGTCTA 3180

TCACCATTTT TCGCGCTTTT TCTGGGTCTC AACTCTAGCA GCCAGCATCG TAGCAAACTT 3240

TGTGTCTCTA CTCATGTTCG GTTTGACACC AGTATTGGAT ATGCCAGATA ACATTCCTCC 3300

CATGACCCTA GATCAGTATT GGATATATCT CGTCATGGGA ATTTTCCTTG GATTTTCAGG 3360

TTTTCTCTAT GAGAAAGCTG TATTAAACGT TGGAAGAGTT TATGACTTGA TTGGTCAAAA 3420

AATCCATTTG GATAGGGCTT ATTATCCCAT CTTGGCTTTT ATCCTTATCA TACCAGTCGG 3480

AATCTTCTTA CCTCAAATCA TTGGTGGCGG AAATCAGCTT GTCCTTTCTT TAACTGAACA 3540

AAATTTTAGT TTCCAAGTTT TATTAGCTTA CTTTTTAATC CGCTTTATTT GGAGTATGAT 3600

TAGCTATGGA AGTGGACTGC CAGGAGGAAT TTTCCTCCCC ATTTTAGCTC TTGGTTCTTT 3660

GCTTGGTGCC TTAGTTGGTG TTATCTGTGT CAATCTTGGA CTTGTCAGTC AAGAGCAATT 3720

CCCTATATTT GTCATTCTAG GAATGAGTGG CTATTTTGGA GCCATATCAA AAGCTCCCTT 3780

AACCGCTATG ATCCTCGTAA CTGAGATGGT AGGAGATATT CGCAACCTTA TGCCACTTGG 3840

TCTTGTCACT CTTGTTTCTT ATATTATCAT GGATTTGCTC AAAGGTACGC CAGTCTATGA 3900

AGCCATGCTG GAAAAAATGC TTCCAGAAGA AGTATCTAGC GAAGGAGAAG TTACACTTAT 3960

CGAAATACCA GTTTCTGATA AAATTGCTGG GAAACAAGTT CATGAACTCA ACTTACCACA 4020

CAACGTCCTC ATCACAACTC AAGTCCATAA TGGCAAGAGC CAAACAGTTA ACGGCTCAAC 4080

CAGAATGTAT CTGGGTGATA TGATTCACCT GGTTATTCCA AAAAGTGAAA TTGGAAAAGT 4140

CAAAGATTTG TTGTTGTAGT ATGAGTATTT ACATAATTTA TGTTATGTAA ATGATCAGTT 4200

TGATTTATTT AGAAAACCGA TTCTCAGGAA TGAGATCGGT TATTTTTTAC TGATGAGGAA 4260

TTTTACATAT AAATAATTGA ACTTTATTAA AAATAAGACT ATAATTAAGT TAGAAATGAT 4320

AAAGTATAAA GCTAGAAAGG AGTTTACTGT ATCAAATCTG TACAGTAAGA TTAAAATCAT 4380

GAAAAAGAAA ACAATAGCAA TTATATAGAG AAATGAAATA GAAATAGGAT AAAACAATCA 4440

GGACAATCAA ATCAATTTCT AGCAATGTTT TAGAAGTCCA GATGTACTAT TCTAGTTTCA 4500

ATCTATTATA CAATGTGTTT TGTATCTCAT AGCTCCTTAT ATAGCTCTTC AGTTATGTAG 4560

TATTAACAGA AGTTTAGTGG GTGAGATTTT TATTATTTTC CTTATTCTGT TTTGTTTGTA 4620

GGTCTAAGTC TTTTTATCAC TTTGAAAAAC TCCTATAACA TCTTTCCGAA AAACTATAAT 4680

TTTCTTGAAA AATATACAAG TCTATGCTAT ACTACTAGTA TACTTACTTA TGGAGAAAAT 4740

ACATGAAACG TGAGATTTTA CTGGAACGAA TCGACAAACT AAAACAACTC ATGCCCTGGT 4800

AAGTTCTGGA ATACTACCAA 4820

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 21338 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

CTACGACATC ATGATTAACA GTCATGCGCT ACTACCAACT GAGCTATGGC GGATAAAATA 60

GTCCGTACGG GATTCGAACC CGTGTTACCG CCGTGAAAAG GCGGTGTCTT AACCCCTTGA 120

CCAACGGACC TTCTATCTGT AGCAGATATA ACCATTATAT CAATTTCTTG CTAATTGTCA 180

ATCACTTTTG AGATTTTTTC TCTAAAATAT CTTTTAATTT TCTAATTTTT AATCTTGAAA 240

TAGGACAACG ATGGTCTTCA TAGAAAACAA TTTCTAAGTT TTTTCGATCA ATTTCTCTGA 300

TATTACCTAT ATTTACCAAA AATGACTTGT GAGGAGAATA AAATCGCTGA GTATGTTTGT 360

CCTTTTCCTG AATATCTGTC ATGGTACCAT AAAACTCTTT TGCAAAATTC TTACCAATAA 420

TGCGCAATTT ATGAGATACC CCTGTTGTTT CAATATACAA AATATCATGG TAAGGAATTT 480

TTAAATCATT TCCCTTGTAA TTGTAGTCGA AATAATCTAC AACATCTTCA TTTTCAAGTA 540

ACATACTCTT CGTGTAGAAG ATATTTTGCT CAATTCTCTT CTTAAACATC TCATCATTGA 600

TATCCTTATC AACAAAATCT AGGGCTGATA CCTGGTATTT ATAGGTTAGA GTCGCAAACT 660

CTGATCGACT AGTGATAAAG ACGATAATAG CGTAAGGATT GTAATGACGA ATGAGCTGAG 720

CCACTTCAAA TCCCTTTTTC TCAATTCCAT GAATATCGAT ATCTAGGAAA TAAAGCTGAT 780

TTACTTCATC ATTTTCAATG TATTCTTCAA ATTCACGGAC TTTTCCCGTT GTCTTGTATG 840

ATATTGGAAT ATTCGATTCT TTCGAAATTT CATCCAATAT TCTCTCTAGT CTCACTTGAT 900

GTTCAATAAC ATCTTCTAAA ATTAAAACTT TCATTCAAAT TCCCTCTTAA ATCTAATGAT 960

TTGTCTAAAT GTACTGCCTT CCATCTCTGT TTCTAAAATA ATATTGTTGT ACTTATCTAG 1020

TAGTTCTTTC ACATTATTTA ATCCGACTCC GCGATTTCTT CCCTTAGTGG AGAATCCTAA 1080

GGCAAATAGA TCTCCTGAAG GAGTCATCGT CATTTTACAT GAATTCTGAA TCACAATAAC 1140

TGTTTCAGTT TCCATCTTAA TAACTGCTAC TTCCATCTGC TTTTTATAGC TATCAGCCGA 1200

TCCTTCGACA GCATTATTCA ATAAAACGCT CATGATACGA ACCAAATCCA ATAGTTCAAT 1260

TGGAAGCTTG GTAATCGTAT CTTTTACTTC CAGTGTAAAC TCTACACCAT TATTTCGAGC 1320

ATAGACAATT GACTGAGCAA CCAAACTTCG TAAAGCTGAG TCTTCTATGT TGTTCAAATC 1380

AAAGTAAGTG TACTTATCTG AACGCAATTT ATGATTTGCT TTGACTAAAA CTTCATTGTA 1440

AATTCTGTCA ATTTCCTGTA AATTACCACT GTCAATTGCC ATCTGCATGC TGACAAGCAT 1500

TCCAGCATAA TCATGTCGAA AACCACGGAT TTCATTATAC AGACCAACAA TTTCATCTGT 1560

GTAATTCTGT AAATGTTTCT GTTCAAATTT CTTCTGCTTC AAAGCAATCT CTTTCTCCAT 1620

TTGAACTTTA TGAGAATTCA TTGCAAAGAA GGTCAAAAGG AGAGAGATAA AGACAATAGA 1680

TGACAAAATA CTTCCAAAAC TATTCAAATG TTTAATCGTA CTTACCATAT CTGAAACGAA 1740

AGATACAATA TGTAGCAATA GTAAAGCAAA AAATACTTTT TTCAAGAAAG GATAAAGGTA 1800

GTCCTTGTCA AAATAGGCTA GTTCCAAATG GAAATAGTAA ATGATTTTTA ATGTAACAAA 1860

ATAGGTTAAC ACCGTCACAA CGAAAAAGAA TGGGAAATGA TATTGTAAAA CAAAATTATC 1920

TCCTGTTATA GAGGAGAAAA TTACGGACAG AAAGTTATGA GTGCTCTCAT ATAAAAGAGA 1980

TAGTAGTAAA CTTAGGAATA GTCCTCTATC CCTCTCATAC TGTTTCATCC ATCGAAAATA 2040

GGAATATAAG CCCAAAGGAA ATAAAAATCT TTCAATCCCT ATTTTATCTA AATATAGAAG 2100

ATAAAAGGAA AATTCAAGTA CTATTTCAGT TAGTAATGTA TAAGCACCAA AAACGTATAA 2160

TTCTTTTCTA TTTATTCGAC CTTTACAAAT TAAACGGTAA CTGTGACTAA TAATTAAAAA 2220

ATGAACAATA ACTGTCCCAA ATCCAAGTAA ATCCATTACT CTTTCTCCTT ATTTCATTAC 2280

TTTTTTCGTA GGAAAAGAAA ATCAAGGATG ATTCTTGAAA TCCTCATCTC CCCACCTTTA 2340

ATCTTTTGTA AGTCTTTTTC CTTCAAAGCT ACAAACTGTT CCAATTTAAC TGTGTTTTTC 2400

ATAATAAAAT CTCCTAAAAT GTTTTTTCTT GTAAGCTAAC TTACAAAAAC CATTATACAA 2460

AATGGAATTT CGTTTTAGAT AAAATTCTCT CAACTGTCAT TTTTTTCTCC CAAAGTGTAC 2520

TTTTTTAAGA AAAAAGCCGG GAAAATTCCC AGCTTTGCTA TTATATTGAT CCCAGCAGGA 2580

TTCGAACCTG CGACCGTTCG CTTAGAAGGC GAATGCTCTA TCCAGCTGAG CTATGAGACC 2640

TAATACAATT ATTCTACCAA AAATTCAATT AAAAGTCAAT TTTCTATTTA TGGTAGGGGA 2700

ATCCCTGCTG AATCGTAAAA GCGCGATAGA TTTGTTCAAC AAGAACTAGT CTCATTAACT 2760

GATGGGGTAA GGTTAGGCGA CCAAAACTGA CAGAAAGATT GGCTCTATTT TTTACAGATG 2820

ATGATAATCC TAAACTTCCC CCAATAATAA AAGTAAGAGT AGAAAATCCT TTTATAGAAG 2880

TTTCTTCTAA CTGCTTACTA AATTCTTCTG AGAAGAAAGT TTTCCCTTCA ATGGCTAACA 2940

CAATAACGAA ATCACGGTCA GCAATTTTTG ATAAAATTCT CTGACCTTCT ATTTCTAAAA 3000

TCTTTTGATT TTCTGATTCA CTGGCCTTAT CTGGTGTTTT TTCATCTGAT AACTCAATCA 3060

TTTCAAACTT AGCAAATCTA GAAATTCGTT TTGAATACTC TGCGATACCA TCTTTTAAAT 3120

ACTTTTCTTT CAGTTTCCCA ACTGTTACAA CTTTAATTTT CATGACTCTA TTCTAACATA 3180

TTCTCTATTT TTTCACATCT TATTCACAAA ATAAAAAATA GATTTCAATT AAGAAAATCA 3240

CAATTTCAAA AGAGTTATCC ACAGTTTGTG TAAAACTTTT GTGTTTAAGT TATAATTAAG 3300

CTAGTCAGTT TATACTTTCA GTAATTCAAA CATATGGAGG CAAATATGAA ACATCTAAAA 3360

ACATTTTACA AAAAATGGTT TCAATTATTA GTCGTTATCG TCATTAGCTT TTTTAGTGGA 3420

GCCTTGGGTA GTTTTTCAAT AACTCAACTA ACTCAAAAAA GTAGTGTAAA CAACTCTAAC 3480

AACAATAGTA CTATTACACA AACTGCCTAT AAGAACGAAA ATTCAACAAC ACAGGCTGTT 3540

AACAAAGTAA AAGATGCTGT TGTTTCTGTT ATTACTTATT CGGCAAACAG ACAAAATAGC 3600

GTATTTGGCA ATGATGATAC TGACACAGAT TCTCAGCGAA TCTCTAGTGA AGGATCTGGA 3660

GTTATTTATA AAAAGAATGA TAAAGAAGCT TACATCGTCA CCAACAATCA CGTTATTAAT 3720

GGCGCCAgCA AAGTAGATAT TCGATTGTCA GATGGGACTA AAGTACCTGG AGAAATTGTC 3780

GGAGCTGACA CTTTCTCTGA TATTGCTGTC GTCAAAATCT CTTCAGAAAA AGTGACAACA 3840

GTAGCTGAGT TTGGTGATTC TAGTAAGTTA ACTGTAGGAG AAACTGCTAT TGCCATCGGT 3900

AGCCCGTTAG GTTCTGAATA TGCAAATACT GTCACTCAAG GTATCGTATC CAGTCTCAAT 3960

AGAAATGTAT CCTTAAAATC GGAAGATGGA CAAGCTATTT CTACAAAAGC CATCCAAACT 4020

GATACTGCTA TTAACCCAGG TAACTCTGGC GGCCCACTGA TCAATATTCA AGGGCAGGTT 4080

ATCGGAATTA CCTCAAGTAA AATTGCTACA AATGGAGGAA CATCTGTAGA AGGTCTTGGT 4140

TTCGCAATTC CTGCAAATGA TGCTATCAAT ATTATTGAAC AGTTAGAAAA AAACGGAAAA 4200

GTGACGCGTC CAGCTTTGGG AATCCAGATG GTTAATTTAT CTAATGTGAG TACAAGCGAC 4260

ATCAGAAGAC TCAATATTCC AAGTAATGTT ACATCTGGTG TAATTGTTCG TTCGGTACAA 4320

AGTAATATGC CTGCCAATGG TCACCTTGAA AAATACGATG TAATTACAAA AGTAGATGAC 4380

AAAGAGATTG CTTCATCAAC AGACTTACAA AGTGCTCTTT ACAACCATTC TATCGGAGAC 4440

ACCATTAAGA TAACCTACTA TCGTAACGGG AAAGAAGAAA CTACCTCTAT CAAACTTAAC 4500

AAGAGTTCAG GTGATTTAGA ATCTTAATTG ACATCTATGT AAAGAAAGCT TTACATAAGA 4560

GAAAAGATGT GTTAGTGTAG AATCATGGAA AAATTTGAAA TGATTTCTAT CACAGATATA 4620

CAAAAAAATC CCTATCAACC CCGAAAAGAA TTTGATAGAG AAAAACTAGA TGAACTAGCA 4680

CAGTCTATCA AAGAAAATGG GGTCATTCAA CCGATTATTG TTCGTCAATC TCCTGTTATT 4740

GGTTATGAAA TCcTTGCAGG AGAGAGACGC TATCGGGCTT CACTTTTAGC TGGTCTACGG 4800

TCTATCCCAG CTGTTGTTAA ACAGATTTCA GACCAAGAGA TGATGGTCCA GTCCATTATT 4860

GAAAATTTAC AGAGAGAAAA TTTAAACCCA ATAGAAGAAG CACGCGCCTA TGAATCTCTC 4920

GTAGAGAAAG GATTCACCCA TGCTGAAATT GCAGATAAGA TGGGCAAGTC TCGTCCATAT 4980

ATCAGCAACT CCATTCGTTT ACTTTCCTTG CCAGAACAGA TTCTTTCAGA AGTAGAAAAT 5040

GGCAAACTAT CACAAGCCCA TGCGCGTTCC CTAGTTGGGT TAAATAAGGA ACAACAAGAC 5100

TATTTCTTTC AACGGATTAT AGAAGAAGAT ATTTCTGTAA GGAAATTAGA AGCTCTTCTG 5160

ACAGAGAAAA AACAAAAGAA ACAGCAAAAA ACTAATCATT TCATACAAAA TGAAGAAAAA 5220

CAGTTAAGAA AACTACTCGG ATTAGATGTA GAAATTAAAC TATCTAAAAA AGACAGTGGA 5280

AAAATCATTA TTTCTTTTTC AAATCAAGAA GAATATAGTA GAATTATCAA CAGCCTGAAA 5340

TAAGGCTGTT CTTTTATTTT TTTATCTCAC AAGGTTATCC ACTATGTTTT TCGATAAAAA 5400

GCTTAATAAA TCAATAATTT CTTCTTTTAT CCCCAACCTG TGGATAAAGT TTGGTAACAT 5460

TGTGGATTAT TTTTCACAGC TTGTGGAAAA TTCTTGCTAT CTATGGTAAA ATATCTCTAG 5520

TATTAAACTT TTAAATAGTA AAGGAGGAGA AAGGATTGAA AGAAAAACAA TTTTGGAATC 5580

GTATATTAGA ATTTGCACAA GAAAGACTGA CTCGATCCAT GTATGATTTC TATGCTATTC 5640

AAGCTGAACT CATCAAGGTA GAGGAAAATG TTGCCACTAT ATTTCTACCT CGCTCTGAAA 5700

TGGAAATGGT CTGGGAAAAA CAACTAAAAG ATATTATTGT AGTAGCTGGT TTTGAAATTT 5760

ATGACGCTGA AATAACTCCC CACTATATTT TCACCAAACC TCAAGATACG ACTAGCTCAC 5820

AAGTTGAAGA AGCTACAAAT TTAACTCTTT ATAACTATAG TCCAAAGTTA GTATCTATTC 5880

CTTATTCAGA TACGGGATTA AAAGAAAAGT ATACCTTTGA TAACTTTATT CAAGGGGATG 5940

GAAATGTTTG GGCTGTATCA GCCGCTTTAG CTGTCTCTGA AGATTTGGCT CTGACCTATA 6000

ACCCTCTTTT TATCTATGGA GGACCAGGCC TTGGTAAGAC TCACTTATTA AACGCTATTG 6060

GAAATGAAAT TCTAAAAAAT ATTCCTAATG CGCGTGTTAA ATATATCCCT GCCGAAAGCT 6120

TTATTAATGA CTTTCTTGAT CACCTAAGAC TTGGGGAAAT GGAAAAGTTT AAAAAGACCT 6180

ATCGTAGTCT TGATCTTTTG TTAATCGATG ATATCCAGTC ACTCAGCGGA AAAAAAGTCG 6240

CAACTCAGGA AGAATTTTTC AATACCTTTA ACGCCCTTCA TGACAAGCAA AAACAGATTG 6300

TCCTAACGAG TGATCGTAGT CCAAAACATC TAGAAGGGCT CGAGGAGAGG CTTGTCACGC 6360

GTTTTAGTTG GGGATTGACA CAAACTATCA CCCCCCCTGA CTTTGAAACA CGTATTGCCA 6420

TTTTACAAAG TAAGACGGAA CATTTAGGCT ACAATTTCCA AAGTGATACT CTAGAATACC 6480

TAGCTGGGCA ATTTGATTCA AATGTTCGAG ATCTTGAGGG AGCCATCAAC GACATCACTT 6540

TAATTGCCAG AGTAAAAAAA ATCAAGGATA TCACTATTGA TATTGCTGCA GAAGCCATTA 6600

GAGCCCGCAA ACAAGATGTT AGCCAAATGC TCGTCATCCC AATTGATAAA ATCCAAACTG 6660

AAGTTGGTAA CTTTTATGGT GTTAGTATCA AAGAAATGAA GGGAAGTAGA CGCCTTCAAA 6720

ATATTGTTTT GGCCCGTCAA GTAGCCATGT ATTTATCTAG AGAACTAACA GATAATAGTC 6780

TTCCAAAAAT TGGGAAGGAA TTTGGGGGAA AAGATCATAC CACAGTCATT CATGCCCATG 6840

CCAAAATAAA ATCTTTGATT GATCAAGACG ATAATTTACG TTTAGAAATT GAATCAATCA 6900

AAAAGAAAAT CAAATAATTT GTGGATAACT TTTAGTTTTT TATCTTTTTT ATCCACATTT 6960

TTTAAACAAG CTAAAAAACT TGATATGACT TGTTTAAAGG CTGTTTTCCA CAGATTTCAC 7020

AGACTCTATT ATTACTATTA TCTTTCTAAT ACTAAAAATA AATAAAGGAG AATCCATGAT 7080

TCATTTTTCA ATTAATAAAA ATTTATTTCT ACAAGCATTA AATACTACTA AGAGAGCTAT 7140

TAGTTCTAAA AATGCCATTC CTATTTTATC AACAGTAAAA ATTGACGTGA CCAATGAAGG 7200

TATTACTTTA ATTGGTTCAA ATGGTCAAAT TTCAATTGAA AATTTTATTT CTCAAAAAAA 7260

TGAAGATGCT GGTTTGTTAA TTACTTCTTT AGGTTCGATC CTTCTTGAAG CTTCTTTCTT 7320

TATCAATGTA GTATCTAGTT TACCTGATGT AACTCTTGAT TTTAAAGAAA TTGAACAAAA 7380

TCAAATTGTT TTAACCAGTG GCAAATCAGA AATTACCCTA AAAGGAAAAG ATAGCGAACA 7440

ATATCCACGA ATCCAAGAAA TTTCAGCAAG CACTCCTTTA ATACTTGAAA CAAAATTACT 7500

CAAGAAAATT ATTAATGAAA CAGCCTTTGC TGCAAGTACA CAAGAGAGTC GTCCGATTTT 7560

AACAGGTGTC CACTTCGTAT TGAGTCAACA CAAAGAGTTA AAAACAGTTG CAACAGACTC 7620

TCATCGCCTA AGCCAGAAAA AATTGACTCT TGAAAAAAAT AGTGATGATT TTGATGTCGT 7680

AATTCCTAGC CGTTCTCTAC GCGAATTTTC AGCGGTATTT ACAGATGATA TCGAAACTGT 7740

AGAGATTTTC TTTGCCAATA ACCAAATCCT CTTTAGAAGC GAAAATATTA GCTTCTATAC 7800

TCGTCTCCTA GAAGGAAACT ATCCTGATAC AGATCGCTTG ATTCCAACAG ACTTTAACAC 7860

TACTATTACT TTTAATGTGG TAAACTTACG CCAGTCAATG GAGCGTGCCC GTCTTTTATC 7920

AAGTGCGACT CAAAATGGTA CTGTGAAACT TGAAATTAAG GATGGGGTTG TTAGCGCCCA 7980

TGTTCACTCT CCAGAAGTTG GTAAAGTAAA CGAAGAAATC GATACTGATC AGGTTACTGG 8040

TGAAGATTTG ACCATTAGTT TCAACCCAAC TTACTTGATT GATTCTCTTA AAGCTTTAAA 8100

TAGCGAAAAG GTGACTATTA GCTTTATCTC AGCTGTTCGT CCATTTACTC TTGTGCCAGC 8160

AGATACTGAC GAAGACTTCA TGCAGCTCAT TACACCAGTT CGTACAAATT AAGTGAAAGA 8220

GGTTGAGCCT GGCTCGCCTC TTTTATGATA TAATCGAAAA AGAAAAGGAG AGTAGTATGT 8280

ATCAAGTTGG AAATTTTGTT GAGATGAAAA AATCACACGC TTGTACAATC AAGTCGACTG 8340

GTAAAAAGGC TAATCGTTGG GAAATTACAC GTGTAGGAGC AGATATCAAA ATAAAATGTA 8400

GTAATTGTGA GCATGTTGTC ATGATGGGGC GATATGATTT TGAGCGAAAA ATGAATAAAA 8460

TTATTGACTG AGAACCCTTA GTTAGAGGGT TAGCACTTTA TCCCTTTTTG TGTTATAATA 8520

TTAGGGATTG AAATGAAAAC GGAGAATGAG AAATATGGCT TTGACAGCAG GTATCGTTGG 8580

TTTGCCAAAC GTTGGTAAAT CAACACTATT TAATGCAATT ACAAAAGCAG GAGCAGAGGC 8640

AGCAAACTAC CCATTTGCGA CGATTGATCC AAATGTTGGA ATGGTGGAAG TTCCAGATGA 8700

ACGCCTACAA AAACTAACTG AAATGATAAC TCCTAAAAAG ACAGTTCCCA CAACATTTGA 8760

ATTTACAGAT ATTGCAGGGA TTGTAAAAGG AGCTTCAAAA GGAGAGGGGC TAGGGAATAA 8820

ATTCTTGGCC AATATTCGTG AAGTAGATGC GATTGTTCAC GTAGTTCGTG CTTTTGATGA 8880

TGAAAATGTA ATGCGCGAGC AAGGACGTGA AGACGCCTTT GTAGATCCAC TTGCAGATAT 8940

TGATACCATT AATCTGGAAT TGATTCTTGC TGACTTAGAA TCAGTGAACA AACGATATGC 9000

GCGTGTAGAA AAGATGGCAC GTACGCAAAA AGATAAAGAA TCAGTAGCAG AATTCAATGT 9060

TCTTCAAAAG ATTAAACCAG TCCTAGAAGA CGGGAAATCA GCTCGTACCA TTGAATTTAC 9120

AGATGAGGAA CAAAAGGTTG TCAAAGGTCT TTTCCTTTTG ACGACTAAAC CAGTTCTTTA 9180

TGTAGCTAAT GTGGACGAGG ATGTGGTTTC AGAACCTGAC TCTATCGACT ATGTCAAACA 9240

AATTCGTGAA TTTGCAGCGA CAGAAAATGC TGAAGTAGTC GTTATTTCTG CGCGTGCTGA 9300

GGAAGAAATT TCTGAATTGA ATGATGAAGA TAAAAAAGAG TTTCTTGAAG CCATTGGTTT 9360

GACAGAATCA GGTGTAGATA AGTTGACGCG TGCAGCTTAC CACTTGCTTG GATTGGGAAC 9420

TTACTTCACA GCTGGTGAAA AAGAAGTTCG CGCTTGGACT TTCAAACGTG GTATGAAGGC 9480

TCCTCAAGCA GCTGGTATTA TCCACTCAGA CTTTGAAAAA GGCTTTATTC GTGCAGTAAC 9540

CATGTCATAT GAAGATCTAG TGAAATACGG ATCTGAAAAG GCCGTAAAAG AAGCTGGACG 9600

CTTGCGTGAA GAAGGAAAAG AATATATCGT TCAAGATGGC GATATCATGG AATTCCGCTT 9660

TAATGTCTAA AAATTAATAA ATGGTGTCAA TTAGGTTGGA AAAAAATTCC AACCCTTTTG 9720

GCTTTTGAAA GGAAAAATAA ATGACCAAAT TACTTGTAGG CTTGGGAAAT CCAGGGGATA 9780

AATATTTTGA AACAAAACAC AATGTTGGTT TTATGTTGAT TGATCAACTA GCGAAGAAAC 9840

AGAATGTCAC TTTTACACAC GATAAGATAT TTCAAGCTGA CCTAGCATCC TTTTTCCTAA 9900

ATGGAGAAAA AATTTATCTG GTTAAACCAA CGACCTTTAT GAATGAAAGT GGAAAAGCAG 9960

TTCATGCTTT ATTAACTTAC TATGGTTTGG ATATTGACGA TTTACTTATC ATTTACGATG 10020

ATCTTGACAT GGAAGTTGGG AAAATTCGTT TAAGAGCAAA AGGCTCAGCA GGTGGTCATA 10080

ATGGTATCAA GTCTATTATT CAACATATAG GAACTCAGGT CTTTAACCGT GTTAAGATTG 10140

GAATTGGAAG ACCTAAAAAT GGTATGTCAG TTGTTCATCA TGTTTTGAGT AAGTTTGACA 10200

GGGATGATTA TATCGGTATT TTACAGTCTG TTGACAAAGT TGACGATTCT GTAAACTACT 10260

ATTTACAAGA GAAAAATTTT GAGAAAACAA TGCAGAGGTA TAACGGATAA ATGGTGACCT 10320

TATTAGATTT ATTCTCAGAA AATGATCAGA TTAAAAAATG GCATCAAAAT TTAACAGATA 10380

AGAAAAGACA ACTAATACTT GGTTTATCAA CATCTACTAA GGCTCTTGCA ATTGCAAGCA 10440

GTTTAGAAAA AGAAGATAGG ATTGTGTTAT TGACGTCAAC TTATGGAGAA GCAGAAGGAC 10500

TTGTTAGTGA TCTTATTTCT ATCTTGGGTG AGGAACTCGT CTATCCATTT TTGGTAGATG 10560

ATGCTCCTAT GGTGGAGTTT TTGATGTCTT CACAGGAAAA AATTATTTCA CGGGTTGAAG 10620

CCTTGCGTTT TTTGACTGAT TCATCTAAGA AAGGGATTTT AGTTTGTAAT ATCGCAGCAA 10680

GTCGATTGAT TTTACCGTCT CCCAATGCAT TCAAAGATAG TATTGTAAAA ATCTCAGTTG 10740

GTGAAGAATA TGATCAACAC GCGTTTATCC ATCAGTTAAA GGAAAATGGC TATCGAAAAG 10800

TTACTCAAGT ACAAACTCAG GGCGAATTTA GTCTTCGAGG AGATATTTTA GATATTTTTG 10860

AAATATCCCA GTTAGAACCT TGTCGAATTG AGTTTTTTGG TGATGAAATT GATGGTATCA 10920

GGTCATTTGA AGTAGAAACA CAATTATCGA AAGAAAATAA GACAGAACTC ACTATCTTTC 10980

CAGCTAGTGA TATGCTTTTG AGAGAAAAGG ATTATCAACG AGGACAGTCA GCTTTAGAAA 11040

AACAAATTTC AAAAACTTTA TCACCTATTT TGAAATCATA CCTAGAAGAA ATTCTTTCAA 11100

GTTTTCACCA AAAACAAAGT CATGCAGACT CTCGGAAGTT TTTATCTTTG TGCTATGATA 11160

AGACATGGAC TGTCTTTGAT TATATTGAAA AAGATACTCC AATATTCTTT GATGATTATC 11220

AAAAATTGAT GAATCAGTAT GAAGTCTTTG AAAGAGACTT AGCGCAGTAC TTTACAGAAG 11280

AATTACAGAA TAGTAAAGCA TTTTCTGATA TGCAGTATTT TTCTGATATT GAACAAATCT 11340

ATAAAAAACA AAGTCCAGTG ACCTTTTTCT CTAATCTTCA AAAGGGTTTA GGAAATCTCA 11400

AATTTGACAA AATTTATCAA TTCAATCAAT ATCCTATGCA GGAATTTTTC AATCAGTTTT 11460

CTTTTCTAAA AGAAGAAATT GAACGATATA AAAAAATGGA TTACACCATT ATTCTGCAGT 11520

CTAGCAATTC AATGGGAAGT AAAACATTGG AGGATATGTT AGAGGAATAT CAGATTAAAT 11580

TGGATTCTAG AGATAAGACA AATATCTGTA AAGAATCTGT AAACTTAATA GAGGGTAATC 11640

TCAGACATGG TTTTCATTTT GTAGATGAAA AGATTTTATT GATAACTGAA CATGAGATTT 11700

TTCAAAAGAA ATTAAAGCGT CGTTTTCGAA GACAACATGT TTCAAATGCA GAGAGATTAA 11760

AAGATTACAA TGAACTTGAA AAAGGGGACT ATGTTGTCCA TCATATCCAT GGGATTGGTC 11820

AATATCTAGG AATTGAAACC ATTGAAATCA AGGGAATTCA TCGCGATTAT GTCAGTGTCC 11880

AATACCAAAA TGGTGATCAA ATTTCTATCC CCGTGGAACA GATTCATCTA CTGTCCAAAT 11940

ATATTTCAAG TGATGGTAAA GCTCCAAAAC TCAATAAATT AAATGACGGT CATTTTAAAA 12000

AGGCCAAGCA AAAGGTTAAG AACCAGGTAG AGGATATAGC TGATGATTTA ATCAAACTCT 12060

ACTCTGAACG TAGTCAGTTG AAGGGTTTTG CTTTCTCAGC TGATGATGAT GATCAAGATG 12120

CCTTTGATGA TGCTTTCCCT TATGTTGAAA CGGATGATCA ACTTCGTAGT ATTGAGGAAA 12180

TCAAGAGGGA TATGCAGGCT TCTCAGCCAA TGGATCGACT TTTAGTTGGG GATGTTGGTT 12240

TTGGAAAGAC TGAAGTTGCT ATGCGTGCAG CCTTTAAAGC AGTCAATGAT CACAAACAGG 12300

TTGTCATTCT AGTTCCGACG ACGGTTTTAG CGCAACAGCA CTATACGAAT TTTAAGGAAC 12360

GATTCCAAAA TTTTGCAGTT AATATTGATG TGTTGAGTCG CTTTAGAAGT AAAAAAGAGC 12420

AGACTGCAAC ACTTGAAAAA TTGAAAAACG GTCAAGTCGA TATTTTGATT GGAACACATC 12480

GTGTTTTGTC AAAAGATGTT GTGTTTGCTG ATTTGGGCTT GATGATTATT GATGAGGAAC 12540

AGCGATTTGG TGTCAAGCAT AAGGAAACTT TGAAAGAACT GAAGAAACAA GTGGATGTCC 12600

TAACCTTGAC CGCTACGCCA ATCCCTCGTA CCCTCCATAT GTCTATGCTG GGAATCAGAG 12660

ATTTATCTGT TATTGAAACT CCGCCGACTA ATCGCTATCC TGTTCAGACC TATGTTTTGG 12720

AAAAGAATGA TAGTGTCATT CGTGATGCTG TCTTGCGTGA AATGGAGCGT GGAGGTCAAG 12780

TTTATTATCT TTACAACAAA GTTGACACAA TTGTTCAGAA GGTTTCAGAA TTACAGGAGT 12840

TGATTCCGGA GGCTTCGATT GGATATGTTC ATGGTCGAAT GAGTGAAGTC CAGTTGGAAA 12900

ATACTCTATT AGACTTTATT GAGGGACAAT ACGATATCTT GGTGACGACT ACTATTATTG 12960

AGACAGGGGT GGACATTCCA AATGCTAATA CTTTATTTAT TGAAAATGCG GACCATATGG 13020

GCTTGTCAAC CTTATATCAG TTAAGAGGAA GAGTCGGTCG TAGTAATCGT ATTGCTTATG 13080

CTTATCTCAT GTATCGTCCA GAAAAATCAA TCAGTGAAGT CTCTGAAAAG AGATTAGAAG 13140

CGATTAAAGG ATTTACAGAA TTGGGCTCTG GCTTTAAGAT TGCAATGCGA GATCTTTCGA 13200

TTCGTGGAGC AGGAAATCTT TTAGGAAAAT CCCAGTCTGG TTTCATTGAT TCTGTTGGTT 13260

TTGAATTGTA TTCGCAGTTA TTAGAGGAAG CTATTGCTAA ACGAAACGGT AATGCTAACG 13320

CTAACACAAG AACCAAAGGG AATGCTGAGT TGATTTTGCA AATTGATGCC TATCTTCCTG 13380

ATACTTATAT TTCTGATCAA CGACATAAGA TTGAAATTTA CAAGAAAATT CGTCAAATTG 13440

ACAACCGTGT CAATTATGAA GAGTTACAAG AGGAGTTGAT AGACCGTTTT GGAGAATACC 13500

CAGATGTAGT AGCCTATCTG TTAGAGATTG GTTTGGTCAA ATCATACTTG GACAAGGTCT 13560

TTGTTCAACG TGTGGAAAGA AAAGATAATA AAATTACAAT TCAATTTGAA AAAGTCACTC 13620

AACGACTGTT TTTAGCTCAA GATTATTTTA AAGCTTTATC CGTAACGAAC TTAAAAGCAG 13680

GCATCGCTGA GAATAAGGGA TTAATGGAGC TTGTATTTGA TGTCCAAAAT AAGAAAGATT 13740

ATGAAATTTT AGAAGGTTTG CTGATTTTTG GAGAAAGTTT ATTAGAGATA AAAGAGTCTA 13800

AGGAAGAAAA TTCCATTTGA TATTTTTCTT CTATAAAATA GATAAAAATG GTACAATAAT 13860

AAATTGAGGT AATAAGGATG AGATTAGATA AATATTTAAA AGTATCGCGA ATTATCAAGC 13920

GTCGTACAGT CGCAAAGGAA GTAGCAGATA AAGGTAGAAT CAAGGTTAAT GGAATCTTGG 13980

CCAAAAGTTC AACGGACTTG AAAGTTAATG ACCAAGTTGA AATTCGCTTT GGCAATAAGT 14040

TGCTGCTTGT AAAAGTACTA GAGATGAAAG ATAGTACAAA AAAAGAAGAT GCAGCAGGAA 14100

TGTATGAAAT TATCAGTGAA ACACGGGTAG AAGAAAATGT CTAAAAATAT TGTACAATTG 14160

AATAATTCTT TTATTCAAAA TGAATACCAA CGTCGTCGCT ACCTGATGAA AGAACGACAA 14220

AAACGGAATC GTTTTATGGG AGGGGTATTG ATTTTGATTA TGCTATTATT TATCTTGCCA 14280

ACTTTTAATT TAGCGCAGAG TTATCAGCAA TTACTCCAAA GACGTCAGCA ATTAGCAGAC 14340

TTGCAAACTC AGTATCAAAC TTTGAGTGAT GAAAAGGATA AGGAGACAGC ATTTGCTACC 14400

AAGTTGAAAG ATGAAGATTA TGCTGCTAAA TATACACGAG CGAAGTACTA TTATTCTAAG 14460

TCGAGGGAAA AAGTTTATAC GATTCCTGAC TTGCTTCAAA GGTGATAAAA TGGAAAATTT 14520

ATTAGACGTA ATAGAGCAAT TTTTGAGTTT GTCAGATGAA AAGCTGGAAG AATTGGCTGA 14580

TAAAAATCAA TTATTGCGTT TACAAGAAGA AAAGGAAAGG AAGAATGCGT AAATTCTTAA 14640

TTATTTTGTT GCTACCAAGT TTTTTGACCA TTTCAAAAGT CGTTAGCACA GAAAAAGAAG 14700

TCGTCTATAC TTCGAAAGAA ATTTATTACC TTTCACAATC TGACTTTGGT ATTTATTTTA 14760

GAGAAAAATT AAGTTCTCCC ATGGTTTATG GAGAGGTTCC TGTTTATGCG AATGAAGATT 14820

TAGTAGTGGA ATCTGGGAAA TTGACTCCCA AAACAAGTTT TCAAATAACC GAGTGGCGCT 14880

TAAATAAACA AGGAATTCCA GTATTTAAGC TATCAAATCA TCAATTTATA GCTGCGGACA 14940

AACGATTTTT ATATGATCAA TCAGAGGTAA CTCCAACAAT AAAAAAAGTA TGGTTAGAAT 15000

CTGACTTTAA ACTGTACAAT AGTCCTTATG ATTTAAAAGA AGTGAAATCA TCCTTATCAG 15060

CTTATTCGCA AGTATCAATC GACAAGACCA TGTTTGTAGA AGGAAGAGAA TTTCTACATA 15120

TTGATCAGGC TGGATGGGTA GCTAAAGAAT CAACTTCTGA AGAAGATAAT CGGATGAGTA 15180

AAGTTCAAGA AATGTTATCT GAAAAATATC AGAAAGATTC TTTCTCTATT TATGTTAAGC 15240

AACTGACTAC TGGAAAAGAA GCTGGTATCA ATCAAGATGA AAAGATGTAT GCAGCCAGCG 15300

TTTTGAAACT CTCTTATCTC TATTATACGC AAGAAAAAAT AAATGAGGGT CTTTATCAGT 15360

TAGATACGAC TGTAAAATAC GTATCTGCAG TCAATGATTT TCCAGGTTCT TATAAACCAG 15420

AGGGAAGTGG TAGTCTTCCT AAAAAAGAAG ATAATAAAGA ATATTCTTTA AAGGATTTAA 15480

TTACGAAAGT ATCAAAAGAA TCTGATAATG TAGCTCATAA TCTATTGGGA TATTACATTT 15540

CAAACCAATC TGATGCCACA TTCAAATCCA AGATGTCTGC CATTATGGGA GATGATTGGG 15600

ATCCAAAAGA AAAATTGATT TCTTCTAAGA TGGCCGGGAA GTTTATGGAA GCTATTTATA 15660

ATCAAAATGG ATTTGTGCTA GAGTCTTTGA CTAAAACAGA TTTTGATAGT CAGCGAATTG 15720

CCAAAGGTGT TTCTGTTAAA GTAGCTCATA AAATTGGAGA TGCGGATGAA TTTAAGCATG 15780

ATACGGGTGT TGTCTATGCA GATTCTCCAT TTATTCTTTC TATTTTCACT AAGAATTCTG 15840

ATTATGATAC GATTTCTAAG ATAGCCAAGG ATGTTTATGA GGTTCTAAAA TGAGGGAACC 15900

AGATTTTTTA AATCATTTTC TCAAGAAGGG ATATTTCAAA AAGCATGCTA AGGCGGTTCT 15960

AGCTCTTTCT GGTGGATTAG ATTCCATGTT TCTATTTAAG GTATTGTCTA CTTATCAAAA 16020

AGAGTTAGAG ATTGAATTGA TTCTAGCTCA TGTGAATCAT AAGCAGAGAA TTGAATCAGA 16080

TTGGGAAGAA AAGGAATTAA GGAAGTTGGC TGCTGAAGCA GAGCTTCCTA TTTATATCAG 16140

CAATTTTTCA GGAGAATTTT CAGAAGCGCG TGCACGAAAT TTTCGTTATG ATTTTTTTCA 16200

AGAGGTCATG AAAAAGACAG GTGCGACAGC TTTAGTCACT GCCCACCATG CTGATGATCA 16260

GGTGGAAACG ATTTTTATGC GCTTGATTCG AGGAACTCGC TTGCGCTATC TATCAGGAAT 16320

TAAGGAGAAG CAAGTAGTCG GAGAGATAGA AATCATTCGT CCCTTCTTGC ATTTTCAGAA 16380

AAAAGACTTT CCATCAATTT TTCACTTTGA AGATACATCA AATCAGGAGA ATCATTATTT 16440

TCGAAATCGT ATTCGAAATT CTTACTTACC AGAATTGGAA AAAGAAAATC CTCGATTTAG 16500

GGATGCAATC TTAGGCATTG GCAATGAAAT TTTAGATTAT GATTTGGCAA TAGCTGAATT 16560

ATCTAACAAT ATTAATGTGG AAGATTTACA GCAGTTATTT TCTTACTCTG AGTCTACACA 16620

AAGAGTTTTA CTTCAAACTT ATCTGAATCG TTTTCCAGAT TTGAATCTTA CAAAAGCTCA 16680

GTTTGCTGAA GTTCAGCAGA TTTTAAAATC TAAAAGCCAG TATCGTCATC CGATTAAAAA 16740

TGGCTATGAA TTGATAAAAG AGTACCAACA GTTTCAGATT TGTAAAATCA GTCCGCAGgC 16800

TGATGAAAAG GAAGATGAAC TTGTGTTACA CTATCAAAAT CAGGTAGCTT ATCAAGGATA 16860

TTTATTTTCT TTTGGACTTC CATTAGAAGG TGAATTAATT CAACAAATAC CTGTTTCACG 16920

TGAAACATCC ATACACATTC GTCATCGAAA AACAGGAGAT GTTTTGATTA AAAATGGGCA 16980

TAGAAAAAAA CTCAGACGTT TATTTATTGA TTTGAAAATC CCTATGGAAA AGAGAAACTC 17040

TGCTCTTATT ATTGAGCAAT TTGGTGAAAT TGTCTCAATT TTGGGAATTG CGACCAATAA 17100

TTTGAGTAAA AAAACGAAAA ATGATATAAT GAACACTGTA CTTTATATAG AAAAAATAGA 17160

TAGGTAAAAA ATGTTAGAAA ACGATATTAA AAAAGTCCTC GTTTCACACG ATGAAATTAC 17220

AGAAGCAGCT AAAAAACTAG GTGCTCAATT AACTAAAGAC TATGCAGGAA AAAATCCAAT 17280

CTTAGTTGGG ATTTTAAAAG GATCTATTCC TTTTATGGCT GAATTGGTCA AACATATTGA 17340

TACACATATT GAAATGGACT TCATGATGGT TTCTAGCTAC CATGGTGGAA CAGCAAGTAG 17400

TGGTGTTATC AATATTAAAC AAGATGTGAC TCAAGATATC AAAGGAAGAC ATGTTCTATT 17460

TGTAGAAGAT ATCATTGATA CAGGTCAAAC TTTGAAGAAT TTGCGAGATA TGTTTAAAGA 17520

AAGAGAAGCA GCTTCTGTTA AAATTGCAAC CTTGTTGGAT AAACCAGAAG GACGTGTTGT 17580

AGAAATTGAG GCAGACTATA CTTGCTTTAC TATCCCAAAT GAGTTTGTAG TAGGTTATGG 17640

TTTAGACTAC AAAGAAAATT ATCGTAATCT TCCTTATATT GGAGTATTGA AAGAGGAAGT 17700

GTATTCAAAT TAGAAAGAAT AATCTTTAAT GAAAAAACAA AATAATGGTT TAATTAAAAA 17760

TCCTTTTCTA TGGTTATTAT TTATCTTTTT CCTTGTGACA GGATTCCAGT ATTTCTATTC 17820

TGGGAATAAC TCAGGAGGAA GTCAGCAAAT CAACTATACT GAGTTGGTAC AAGAAATTAC 17880

CGATGGTAAT GTAAAAGAAT TAACTTACCA ACCAAATGGT AGTGTTATCG AAGTTTCTGG 17940

TGTCTATAAA AATCCTAAAA CAAGTAAAGA AGAAACAGGT ATTCAGTTTT TCACGCCATC 18000

TGTTACTAAG GTAGAGAAAT TTACCAGCAC TATTCTTCCT GCAGATACTA CCGTATCAGA 18060

ATTGCAAAAA CTTGCTACTG ACCATAAAGC AGAAGTAACT GTTAAGCATG AAAGTTCAAG 18120

TGGTATATGG ATTAATCTAC TCGTATCCAT TGTGCCATTT GGAATTCTAT TCTTCTTCCT 18180

ATTCTCTATG ATGGGAAATA TGGGAGGAGG CAATGGCCGT AATCCAATGA GTTTTGGACG 18240

TAGTAAGGCT AAAGCAGCAA ATAAAGAAGA TATTAAAGTA AGATTTTCAG ATGTTGCTGG 18300

AGCTGAGGAA GAAAAACAAG AACTAGTTGA AGTTGTTGAG TTCTTAAAAG ATCCAAAACG 18360

ATTCACAAAA CTTGGAGCCC GTATTCCAGC AGGTGTTCTT TTGGAGGGAC CTCCGGGGAC 18420

AGGTAAAACT TTGCTTGCTA AGGCAGTCGC TGGAGAAGCA GGTGTTCCAT TCTTTAGTAT 18480

CTCAGGTTCT GACTTTGTAG AAATGTTTGT CGGAGTTGGA GCTAGTCGTG TTCGCTCTCT 18540

TTTTGAGGAT GCCAAAAAAG CAGCACCAGC TATCATCTTT ATCGATGAAA TTGATGCTGT 18600

TGGACGTCAA CGTGGAGTCG GTCTCGGCGG AGGTAATGAC GAACGTGAAC AAACCTTGAA 18660

CCAACTTTTG ATTGAGATGG ATGGTTTTGA GGGAAATGAA GGGATTATCG TCATCGCTGC 18720

GACAAACCGT TCAGATGTAC TTGACCCTGC CCTTTTGCGT CCAGGACGTT TTGATAGAAA 18780

AGTATTGGTT GGTCGTCCTG ATGTTAAAGG TCGTGAAGCA ATCTTGAAAG TTCACGCTAA 18840

GAATAAGCCT TTAGCAGAAG ATGTTGATTT GAAATTAGTG GCTCAACAAA CTCCAGGCTT 18900

TGTTGGTGCT GATTTAGAGA ATGTCTTGAA TGAAGCAGCT TTAGTTGCTG CTCGTCGCAA 18960

TAAATCGATA ATTGATGCTT CAGATATTGA TGAAGCAGAA GATAGAGTTA TTGCTGGACC 19020

TTCTAAGAAA GATAAGACAG TTTCACAAAA AGAACGAGAA TTGGTTGCTT ACCATGAGGC 19080

AGGACATACC ATTGTTGGTC TAGTCTTGTC GAATGCTCGC GTTGTCCATA AGGTTACAAT 19140

TGTACCACGC GGCCGTGCAG GCGGATACAT GATTGCACTT CCTAAAGAGG ATCAAATGCT 19200

TCTATCTAAA GAAGATATGA AAGAGCAATT GGCTGGCTTA ATGGGTGGAC GTGTAGCTGA 19260

AGAAATTATC TTTAATGTCC AAACCACAGG AGCTTCAAAC GACTTTGAAC AAGCGACACA 19320

AATGGCACGT GCAATGGTTA CAGAGTACGG TATGAGTGAA AAACTTGGCC CAGTACAATA 19380

TGAAGGAAAC CATGCTATGC TTGGTGCACA GAGTCCTCAA AAATCAATTT CAGAACAAAC 19440

AGCTTATGAA ATTGATGAAG AGGTTCGTTC ATTATTAAAT GAGGCACGAA ATAAAGCTGC 19500

TGAAATTATT CAGTCAAATC GTGAAACTCA CAAGTTAATT GCAGAAGCAT TATTGAAATA 19560

CGAAACATTG GATAGTACAC AAATTAAAGC TCTTTACGAA ACAGGAAAGA TGCCTGAAGC 19620

AGTAGAAGAG GAATCTCATG CACTATCCTA TGATGAAGTA AAGTCAAAAA TGAATGACGA 19680

AAAATAACCC TGAGAGAGGC TGGAGCCTCT CTTTTTTGTG CAGTTTAGGA GCTAAAGGGA 19740

ACAGAATGGA GAAAATGGAA CAAATGTGTT TTCTAATCTG TTAGACTGTA TCTAGAAAGG 19800

GGAAAATTAT GATTAAAGAA TTGTATGAAG AAGTCCAAGG GACTGTGTAT AAGTGTAGAA 19860

ATGAATATTA CCTTCATTTA TGGGAATTGT CGGATTGGGA GCAAGAAGGC ATGCTCTGCT 19920

TACATGAATT GATTAGTAGA GAAGAAGGAC TGGTAGACGA TATTCCACGT TTAAGGAAAT 19980

ATTTCAAGAC CAAGTTTCGA AATCGAATTT TAGACTATAT CCGTAAACAG GAAAGTCAGA 20040

AGCGTAGATA CGATAAAGAA CCCTATGAAG AAGTGGGTGA GATCAGTCAT CGTATAAGTG 20100

AGGGGGGTCT CTGGCTAGAT GATTATTATC TCTTTCATGA AACACTAAGA GATTATAGAA 20160

ACAAACAAAG TAAAGAGAAA CAAGAAGAAC TAGAACGCGT CTTAAGCAAT GAACGATTTC 20220

GAGGGCGTCA AAGAGTATTA AGAGACTTAC GCATTGTGTT TAAGGAGTTT ACTATCCGTA 20280

CCCACTAGTA AGTCATGCAA AAAAAATGAA AAAAATTAGA AAAAGTAGTT GACAAAGTTT 20340

GAAAAGGCTG TATAATAGTA AGAGTTGAAA ATAACAACTC AGGTCCGTTG GTCAAGGGGT 20400

TAAGACACCG CCTTTTCACG GCGGTAACAC GGGTTCGAAT CCCGTACGGA CTATGGTATG 20460

TTGCGTCAGG ACCACTTGAT GAAAAAAAGT TTAAAAAAAC TTAAAAATCT TCAAAAAAGT 20520

GTTGACAAGC GAAAGCAGTT GTGATATACT AATATAGTTG TCGCTTGAGA GAAGCAAGTG 20580

ACAAAGACCT TTGAAAACTG AACAAGACGA ACCAATGTGC AGGGCGCTAC AACGTAAGTT 20640

GTAGTACTGA ACAATGAAAA AAACAATAAA TCTGTCAGTG ACAGAAATGA GTAAGAACTC 20700

AAACTTTTTA ATGAGAGTTT GATCCTGGCT CAGGACGAAC GCTGGCGGCG TGCCTAATAC 20760

ATGCAAGTAG AACGCTGAAG GAGGAGCTTG CTTCTCTGGA TGAGTTGCGA ACGGGTGAGT 20820

AACGCGTAGG TAACCTGCCT GGTAGCGGGG GATAACTATT GGAAACGATA GCTAATACCG 20880

CATAAGAGTA GATGTTGCAT GACATTTGCT TAAAAGGTGC ACTTGCATCA CTACCAGATG 20940

GACCTGCGTT GTATTAGCTA GTTGGTGGGG TAACGGCTCA CCAAGGCGAC GATACATAGC 21000

CGACCTGAGA GGGTGATCGG CCACACTGGG ACTGAGACAC GGCCCAGACT CCTACGGGAG 21060

GCAGCAGTAG GGAATCTTCG GCAATGGACG GAAGTCTGAC CGAGCAACGC CGCGTGAGTG 21120

AAGAAGGTTT TCGGATCGTA AAGCTCTGTT GTAAGAGAAG AACGAGTGTG AGAGTGGAAA 21180

GTTCACACTG TGACGGTATC TTACCAGAAA GGGACGGCTA ACTACGTGCC AGCAGCCGCG 21240

GTAATACGTA GGTCCCGAGC GTTGTCCGGA TTTATTGGGC GTAAAGCGAG CGCAGGCGGT 21300

TAGATAAGTC TGAAGTTAAA GGCTGTGGCT TAACCATA 21338

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6273 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

TGTTTTTAAA GAGCCGTGTC TGGATAGACT TTCGGACGCA ACGCTCTATT AGATAATGAA 60

CTGCCTATAC ACAAGATTTC TAACCTTAGT CGACATGAGC TGAAACCTCT TATTTGTTAA 120

GTAGTTCACA AAATATTATA CACCTATTTT ATGAATAGTC AACTGTCTTT ACAGTAAAAT 180

TTTAGAAAAT CATGAAAATT TTCTCTTTCT TTCCATTTTA AGTGACATTC AGTCATTCTC 240

ACATCAAAAA AGCCCAGACG AAATTGTCTG AGCATTCTTT TATCTAGTCG TTTAAGGAAG 300

TTGAGTTCAG TATGTTTAAA GTCTCTGTCC CATCATTTCT TCAACAAACC TTGTTCTTGG 360

AGAAACTCCT TGGCTACTTG CTTTGCTGAC TTGCCTTCAA CACCGACTTG GTAGTTGAGC 420

TGGCTCATCT GGCTTTCTGT AATCTTACCA GCCAATGTAT TAAGAACTCT TTCCAACTCT 480

GGGTGTTTCT TGAGAAGAGC TTCTTTCATG AGTGGAGCCC CTTGATAAGG TGGGAAGAGT 540

TGCTTGTCAT CTTCCAAGAC CTGTAAATCA TAACGCTCCA ATTCCGCATC AGTCGAATAG 600

GCATCCGTGA TTTGAATATC CCCTGACTGA ATAGCCTGAT AGCGAAGGGC TGGCTCAATG 660

GTCGCTACAT TGAGATTGAG ACCATACATT GATTGCAAGC CCTTATTTCC ATCTTCACGG 720

TCGTTAAACT CGAGTGTAAA ACCTGCCTTC AACTGCCCTT CCACTTTTTT CAAGTCTGAA 780

ATGGTCTTCA AGCCATATTC TTGAGCAATC TTTTTCGGAA CAGCTACAGC ATAGGTGTTT 840

TGATAAGACA TGGGTTTGAG ATAGGCTAGA TGATCCTGCT TAGCAATGCC ATCACGCGCC 900

ACCTGATAAA CCTGTTCTGG TTCATGACTC ACCTTGGGTG ATGGTTGAAG CAAACTTTCA 960

GTCACCGTAC CAGTAAATTC AGGATAGATG TCAATATCGC CTTTTTTCAG AGCTTCATAA 1020

AGGAAGCTTG TCTTCCCAAA ATTCGGTTTA ACAGTCGCAG TCATGCTGGT ATTTTCTTCA 1080

ATCAGCAACT TATACATATT GGCCAAAATT TCTGGTTCTG GACCTATTTT CCCAGCAATA 1140

ACCAAGTTTT CCTTCTCTTT TTGAACCAAA AGAGCTGGAC TATAAGACAG ACCCAGTAAT 1200

AAAGCCACCA AGGCAAAACC TGAGAAAATC GTCCGTAATT TTGCTTTTTC CATCACTTTT 1260

AGTAGGAAGT TAAAGGCAAT GGCTAGCACT GCAGAAGAAA GTGCCCCAAT CAAAATCAAA 1320

CTGGCATTAT TACGGTCAAT TCCCAAAAGA ATAAAGGAAC CTAGTCCCCC TGCACCAATC 1380

AAGGCCGCCA AGGTTGCCGT ACCGATAATC AAAACAGCTG CCGTCCGAAT CCCAGACATG 1440

ATAACAGGCA TGGCGAGTGG AATTTCAAAT TTCTTGAGAC GTTCCCATCT GGTCATCCCA 1500

AAGGCAATCC CAGCCTCTTG CAGGTTCGGA TCAATTCCCT TCAGCCCAGT GATAGTATTT 1560

TGCAAAATAG GGAAAATCGC ATAAATCACT AGAGCTGTCA AAGCCGGCAA GGTCCCAATT 1620

CCCATCAAAG GGATAAAGAG CCCCAACAAG GCCAGAGACG GGATGGTCTG GAAAATACCT 1680

GCAATCTGCA AGACCCAGTC GGCCAGCTTC TCATGATAGC GAAGAAAAAC AGCCAAGGGA 1740

ATCGCAAGCA AAATAGCTAG TAACAAGGTC AAAAGCGACA ACTGCAAATG TTGAGATAGA 1800

GCTGTCAACC AATCACTAAA ACGATCCTGA AAAGTTGCAA TTAAATTAGT CATGAACACT 1860

ACCTCCAAAC AAGTCTGCTA CAAAGTCTGT TGCAGGCGCT TTTAAAATTG TCTCGGGATT 1920

CGCTACCTGG CGAATTTCTC CATCCTGCAA GACAGCAATA CGGTCCGCCA ACTTCAAGGC 1980

TTCATCCGTA TCATGGGTTA CAAAAATCGT TGTCATCCCA AACTCTTTAT GCAATTCTTT 2040

TGTCAGAACC TGCAACTGTT TTCTCGAAAT AGCATCCAAG GCCGAAAAGG GTTCATCCAT 2100

GAGGAAAATC TTGGGCTGAC CAATCATAGC TCGGACAATA CCGACCCGTT GCTGTTCTCC 2160

ACCAGATAAT TCACTAGGTA AGCGATGCCC ATACTCGGCT ACTGGTAAAC CAACCTTAGC 2220

CAAAAGCTCT TCTGTTTTCT TCGTAATTTC TTCCTTGCTC CACCCCTTCA TTTCAGGAAT 2280

GAGAGCAATA TTTTCCGCAA CTGTTAGATT TGGAAAAAGA GCAATAGCCT GTAAAACATA 2340

ACCAGTAGAA AGACGAAGTT CACGCTCATC ATAGTCTTTG ATGCGCTTCC CATCCATATA 2400

AATATTTCCA TCAGTTGGTT CCAAAAGACG GTTAATCATC TTGAGCATGG TCGTCTTACC 2460

TGACCCAGAA GGCCCTACTA AAACCATAAA TTCCCCATCC TCAATCTGTA AGTTGACATC 2520

TCTCAAGACA TCCTTTTCTG TGTAGCGCAG TGCTACATTT TTGTATTCAA TCATTCTTTG 2580

TCCTCAATTT AAAACTTCCC TCGATTGGTC AAGTCTTCTA CCTTAGGCAT AACTTCCTTA 2640

TTATCCCAAT GCTCCACAAT TTTCCCGTTC TCTAAACGGA AGATATCGTA CTGGGCATAA 2700

GCAACGCCAT CAATCTGAGT CTGACCATAG CTAACCACAT AGTTTCCTTG TCCTAAGAGT 2760

TGGAAAACAA AGTCAAAAGT GACACTATAT TCAGCCACAT AGTTTTTATA AGCAGCACTT 2820

CCTTGTCCAA TATCATGATT ATGCTGAATC AAATCGTCTG CCACATAATC ACTCCACTGC 2880

TCTAGCTCCC CATTTTGGAA AATTTCTGTC AAGAAACGGC GAACCAGCTT TTTATTTTCT 2940

GCTTTCTTAT CCAAATCCTT GATTTCAAAA TCTCCAAAAA TTTGATCTAG TTGGTCATTT 3000

TCAGGTGTTC GATAGTAGTC AATGACATCC CAATGCTCAA CAATACAACC ATTCTCATCC 3060

TCACGGAAAG TATCCGTCGT CACCCATTGA GCTTCTCCAC CATTCAGATA TTGATGAACA 3120

TGAACAAAGA CCAGATTGCC ATCCTCAATG GTGCGGACAA TCTTAATCTG ACGCTCTGGA 3180

TGACGCTCAA AGAAATCTGC AAAGAAGGCT GCAAATCCTT CTTTCCCGTC AGGAACACCT 3240

GTCGAATGTT GGATATAGGT ATCCCCTACA GACTGGGCTT GAGCCTCAGC AACTCGTCCG 3300

TCTTGAATGG CATGGATGTA TAGGTTGTGA GCATTTTTCA CTTGTTGTGA CATATTCTAA 3360

ACCTCATTTC CCTTCTCTTT CAGATTCGCC AAAATTCTTT CTTGAAAACC TTCAAATTGG 3420

TGAATTTCTT CCTCTGAAAA TCCTTTGTAA AAGATAGTAT CCAATTTCTG ACTGACACGA 3480

TGCCCCACTT CTTTCTGGGA CTTGCCTAAC TCCGTTAAAA CTAAATACTT CTTACGCTTG 3540

TCTTTTCCAC ACGGACTAAC AATTACAAGC TTTTGTTCCT CTAGCTTTTT TATCATAGTC 3600

GTCAGCGTAT TATTCGCAAG TCCAGTCGCA AGCGCGATAT CTGTCGCAGT TGCGCAGCCA 3660

GTTTCACTAT TCCATAAAAC CGCTAAAATC TTGCCCTGTT CACCCCTATA AAGAGCCTCA 3720

GGATCTTGAC TCAGTAACTT TTGAAAAATC CGCCCATTCA ACAAACGAAT ATGATGGGCT 3780

AGCAAATGAC CATCTTTCAT AACACCTCCA ATTTATTTCG ATATCGAAAT GAATAAAACA 3840

ATTGTAACAC TCATCGTTCT AACTGTCAAC TATTTCGATT TAGAAATAAT TTTTGATAAT 3900

TATCCACACC ACCATACTCC GGCTCAACTA ACTTTTAACG AGAGTTTCTA AACTCCTTCG 3960

TCCTCCAGTC TACAAAAGCC TTCCATTCGT ACTATCCTAT ATTTTATGAG GGGACACATT 4020

TTTCCTATCA GACCATTTAT TTTAAAGATA GAAGTAAATC ATAATTGCTT CCATCTGTTC 4080

TTTTATAGTA TATTGAAGTT AGACTAGAGC ACTGTATCTT CTAAAACATT GATAGAAAGC 4140

GATTTGAATT TCCCAATCAA TTTGTTCGTA TTTATAGCAT TTCGAAACTG GAATAGGACA 4200

CCATGACTGC TAAAAGATTT CTATAAATTC ATTTAATTTC CTCAATCAAT TTGTTCATAT 4260

CTTATTTCAT TCCGCTATAA TTTCACCTTA CCCTATCTTT TTCGTAGCAC CCTTCAAACA 4320

GCCTATCCCC TACCGTTTGA CGATTCCTCA CTTCGCTCCA CTTCCATTAC AGAAGTTTCT 4380

TCACTACTAT GGGCTCGGCT GACTTCTCAT GATTCCTTGT TACTACTATT TGAACGCTCA 4440

CGAGATAGAT CTTACAAAAA ATGCTTTGAT CCACAATGGA ATCAAAGCAT TTTAAAGAGT 4500

TCCTCATACA TAAGCGCAGA AGTCGCAGTT CCTCTGTACT TGGCTTCTTC TCTTTTGACA 4560

AAGCGAGCCA AGTTGAGCAA CTCAGGTGCT GGATGTTTGG GATTTAGGAG CAATTCACGA 4620

TTGACCAGGC CTGAGAGACG AACTGCCTGC AATTGCTCAT TTGTAGTAGG CAGTTTTTTA 4680

GTAGTCTCTA GGAGAGCAGC AACTAAATCT TCACTCAAAT CATGTCGAGC ATGATTGTAA 4740

AGATCTTTTA TAAGGCTTTC TAGGTTTGGT TCTACCATCC CTACCACCTC CCTTATGGTT 4800

TAATAATGTT TAATCAAATC AACCGTTGAA CGATCCAATT TCTTCACCAA GGCTTGTAAG 4860

AAAGCTTGCG CTTCTAGGAA GTCATCCATT GCATAGAGGG TTTGGTGAGA ATGGATATAA 4920

CGAGCGCAGA CACCGATAGT TGTTGATGGG ACACCACCAT TTTTCAGATG AGCTGCACCT 4980

GCATCTGTTC CGCCTTTACC ACAGTAGTAT TGGTACTTGA TACCAGCTTC TTCAGCCGTT 5040

GTCAAAAGGA AATCCTTCAT CCCTGGGAGA AGCAAGTGAC CTGGATCATA GAAACGAATC 5100

AAGGTTCCAT CTCCAATCTT GCCTTGACCA CCGTAGACAT CACCTGCTGG TGAGCAATCA 5160

ACTGCGAGGA AGACTTCTGG GTCAAACTTG GTTGTAGAGG TATGAGCGCC ACGCAGACCA 5220

ACTTCTTCTT GGACGTTAGA ACCCAGATAG AGTTCATTGC CGAGTTTTTG ACCCGATAAA 5280

GCTTCAGCTA GCTCGCTTAC CATGAGGACA CCGTAGCGGT TATCCCAAGC TTTTGAGATG 5340

ATATTTTTTT CATTGGCTGT CAAAATTGCA GAACTATCTG GTACAATGGT ATCACCAGGA 5400

CGGATGCCAA AACTTTCTGC CTCAGCCTTG TCCGCAAAAC CACCATCAAA AACGATATCG 5460

GCAATGGCTG GCATGGTTGG TCCCCCCTTT CCACGAGTCA AATGCGGAGG AACAGAACCT 5520

GAAATCACAG GAATTTCATG ACCATCACGA GTCAAGAGTT TGAAACGTTG GCTGCTAACC 5580

ACCATGGGGT TCCAGCCACC GATTTCTACG ACACGGAAGG TACCATCTGG CTTGATTTCG 5640

CTGACCATAA AACCAACTTC GTCCATATGA GAAGCGACCA AGACGCGCGG TGCATCCACA 5700

GCTTCTGAAT GTTTGATACC AAAAATACCA CCCAAGCCAT CTGTCACCAC TTCATCCACA 5760

TGCGGTGTCA ACTTTTCACG AAGATAAGCA CGGACAGGCG CTTCATGACC TGAGACTGCA 5820

GCAAGTTCTG TTACTTCTTT AATTTTTGAA AATAATGTTG TCATTTCAGT TCCTTCTTTC 5880

TTTCATCCAT TTTACCACTT TTTATAGGAG AAGGATAGTG GGAAGGTGGA TTTCTAAGTT 5940

AGTATCTTAG TCCTGCTCTA TCTTAGAAAA GGATAGTATT CTCTTGCATG TAGTGCAAAA 6000

TCTAGTAAAC ATTCCAAAAT TAACTCGAAT ATTTATTTCC AAACAAAAAA ACAATACACC 6060

ATCAAAGTTG TTTGGATTTT TCATGAAATT TACAGAAAAT AGTTGACTTC CCTTTCTTCT 6120

TTCTTTAAAT ATATAGTTGG TTGAGTTTGG AATAGTACGC TGTAGCTGCT AAAACATTTC 6180

TAGAAATTAA TTTGACTTTC CTAATAGAGT TGTTCATATC TTATTTCAAT TTACTATAGT 6240

ACAAAACTAG AAAAGGAAAA AATCATGACC AGG 6273

(2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28171 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

ACAACCTTTT TCAAAAACTC ACCTTGGTAC GGAGATGTTT TGCTTTCTGC TATTATTTTC 60

GGTTATATTC ATATCAATTT TGCTTTAACT CCTCTTGCTT TTTTCATTTA TGCTAGTGGA 120

GGTCTTATTT TAGCTCTATT GTATCGCATG ACTAAAAATC TCTACTATCC AATACTAGTT 180

CATATTCTCA TTAATATCAC TGCCTTCTGG GATGTGTGGT TGCTCCTATT TTCAGGAAGT 240

TAGCTTACTA AAATAATGTC GGAACTTTCC GGCATTTTCT TTTTTCACAA ATAGTCAACG 300

TTTTTCTTTT CGATATTGTA GTGGTGTGTA TCCAGTTATT TTTTTGAATT GATTTTGAAA 360

ATAAGGTTGA CTTGAGAAAG GCAGATAGTG AAGATAGTTA AGAAGAATAG GATGTTCTTT 420

TTTCCTTTTT GGAAAACTTC TAAAATATGG TATAATGAAA AGATAAAGAA GTTGGGGGTA 480

GAAGATGAAC ATTCAACAAT TACGCTATGT TGTGGCTATT GCCAATAGTG GTACTTTTCG 540

TGAAGCTGCT GAAAAGATGT ATGTTAGTCA GCCGAGTCTG TCTATTTCTG TTCGTGATTT 600

GGAAAAAGAG TTGGGCTTTA AGATTTTCCG TCGGACCAGC TCAGGGACTT TCTTGACCCG 660

TCGTGGGATG GAATTTTATG AAAAATCGCA AGAATTGGTT AAAGGATTTG ATATTTTTCA 720

AAATCAGTAT GCCAATCCTG AAGAAGAAAA AGATGAATTT TCTGTTGCTA GCCAGCACTA 780

TGACTTCTTG CCACCAACTA TTACGGCCTT TTCAGAGCGC TATCCTGACT ATAAGAACTT 840

CCGTATTTTT GAATCAACTA CTGTTCAAAT ATTAGATGAA GTGGCGCAAG GGCATAGTGA 900

GATTGGGATT ATCTACCTCA ACAATCAAAA TAAAAAGGGG ATTATGCAAC GGGTTGAAAA 960

ATTAGGTCTG GAGGTCATCG AATTGATTCC TTTCCATACC CATATTTATC TCCGTGAGGG 1020

TCATCCTTTA GCCCAGAAAG AGGAATTAGT CATGGAGGAT TTAGCGGATT TACCAACGGT 1080

TCGTTTCACT CAAGAGAAAG ACGAGTACCT TTATTATTCA GAGAACTTTG TCGATACCAG 1140

CGCTAGCTCA CAGATGTTTA ATGTGACAGA CCGTGCCACC TTGAATGGTA TTTTGGAGCG 1200

GACGGACGCC TATGCGACAG GTTCTGGATT TTTAGATAGT GACAGTGTTA ATGGCATTAC 1260

AGTTATTCGT CTCAAGGATA ACCTAGATAA CCGCATGGTC TATGTTAAAC GTGAAGAAGT 1320

GGAGCTTAGT CAAGCTGGGA CTCTCTTCGT AGAAGTCATG CAAGAATATT TTGATCAAAA 1380

GAGGAAATCA TGAAAAAAAG AGCAATAGTG GCAGTCATTG TACTGCTTTT GATTGGGCTG 1440

GATCAGTTGG TCAAATCCTA TATCGTCCAG CAGATTCCAC TGGGTGAAGT GCGCTCCTGG 1500

ATCCCCAATT TCGTTAGCTT GACCTACCTG CAAAATCGAG GTGCAGCCTT TTCTATCTTA 1560

CAAGATCAGC AGCTGTTATT CGCTGTCATT ACTCTGGTTG TCGTGATAGG TGCCATTTGG 1620

TATTTACATA AACACATGGA GGACTCATTC TGGATGGTCT TGGGTTTGAC TCTAATAATC 1680

GCGGGTGGTC TTGGAAACTT TATTGACAGG GTCAGTCAGG GCTTTGTTGT GGATATGTTC 1740

CACCTTGACT TTATCAACTT TGCAATTTTC AATGTGGCAG ATAGCTATCT GACGGTTGGA 1800

GTGATTATTT TATTGATTGC AATGCTAAAA GAGGAAATAA ATGGAAATTA AAATTGAAAC 1860

TGGTGGTCTG CGTTTGGATA AGGCTTTGTC AGATTTGTCA GAATTATCAC GTAGTCTCGC 1920

GAATGAACAA ATTAAATCAG GCCAGGTCTT GGTCAATGGT CAAGTCAAGA AAGCTAAATA 1980

CACAGTCCAA GAGGGTGATG TCGTCACTTA CCATGTGCCA GAACCAGAGG TATTAGAGTA 2040

TGTGGCTGAG GATCTTCCGC TAGAAATAGT CTACCAAGAT GAGGATGTGG CTGTCGTTAA 2100

CAAACCTCAG GGAATGGTTG TGCACCCGAG TGCTGGTCAT ACCAGTGGAA CCCTAGTAAA 2160

TGCCCTCATG TATCATATTA AGGACTTGTC GGGTATCAAT GGGGTTCTGC GTCCAGGGAT 2220

TGTTCACCGT ATTGATAAGG ATACGTCAGG TCTTCTCATG ATTGCTAAAA ACGATGATGC 2280

GCATCTAGCA CTTGCCCAAG AACTCAAGGA TAAAAAGTCT CTCCGCAAAT ATTGGGCGAT 2340

TGTTCATGGA AATCTACCTA ATGATCGTGG TGTAATTGAA GCGCCGATTG GCCGGAGTGA 2400

AAAAGACCGT AAGAAACAGG CTGTAACTGC TAAAGGGAAG CCTGCAGTGA CGCGTTTTCA 2460

CGTCTTGGAA CGCTTTGGCG ATTATAGCTT AGTAGAGTTG CAACTGGAGA CAGGGCGCAC 2520

TCATCAAATC CGTGTCCACA TGGCTTATAT CGGCCATCCA GTCGCTGGTG ATGAGGTCTA 2580

TGGTCCTCGC AAGACTTTGA AAGGACATGG ACAATTTCTT CATGCCAAGA CTTTAGGTTT 2640

TACTCATCCG AGAACAGGTA AGACCTTGGA ATTTAAAGCA GATATCCCAG AGATTTTTAA 2700

GGAAACCTTG GAGAGATTGA GAAAGTAAGA ATGAAAAAGA AATTAACTAG TTTAGCACTT 2760

GTAGGCGCTT TTTTAGGTTT GTCATGGTAT GGGAATGTTC AGGCTCAAGA AAGTTCAGGA 2820

AATAAAATCC ACTTTATCAA TGTTCAAGAA GGTGGCAGTG ATGCGATTAT TCTTGAAAGC 2880

AATGGACATT TTGCCATGGT GGATACAGGA GAAGATTATG ATTTCCCAGA TGGAAGTGAT 2940

TCTCGCTATC CATGGAGAGA AGGAATTGAA ACGTCTTATA AGCATGTTCT AACAGACCGT 3000

GTCTTTCGTC GTTTGAAGGA ATTGGGTGTC CAAAAACTTG ATTTTATTTT GGTGACCCAT 3060

ACCCACAGTG ATCATATTGG AAATGTTGAT GAATTACTGT CTACCTATCC AGTTGACCGA 3120

GTCTATCTTA AGAAATATAG TGATAGTCGT ATTACTAATT CTGAACGTCT ATGGGATAAT 3180

CTGTATGGCT ATGATAAGGT TTTACAGACT GCTGCAGAAA AAGGTGTTTC AGTTATTCAA 3240

AATATCACAC AAGGGGATGC TCATTTTCAG TTTGGGGACA TGGATATTCA GCTCTATAAT 3300

TATGAAAATG AAACTGATTC ATCGGGTGAA TTAAAGAAAA TTTGGGATGA CAATTCCAAT 3360

TCCTTGATTA GCGTGGTGAA AGTCAATGGC AAGAAAATTT ACCTTGGGGG CGATTTAGAT 3420

AATGTTCATG GAGCAGAAGA CAAGTATGGT CCTCTCATTG GAAAAGTTGA TTTGATGAAG 3480

TTTAATCATC ACCATGATAC CAACAAATCA AATACCAAGG ATTTCATTAA AAATTTGAGT 3540

CCGAGTTTGA TTGTTCAAAC TTCGGATAGT CTACCTTGGA AAAATGGTGT TGATAGTGAG 3600

TATGTTAATT GGCTCAAAGA ACGAGGAATT GAGAGAATCA ACGCAGCCAG CAAAGACTAT 3660

GATGCAACAG TTTTTGATAT TCGAAAAGAC GGTTTTGTCA ATATTTCAAC ATCCTACAAG 3720

CCGATTCCAA GTTTTCAAGC TGGTTGGCAT AAGAGTGCAT ATGGGAACTG GTGGTATCAA 3780

GCGCCTGATT CTACAGGAGA GTATGCTGTC GGTTGGAATG AAATCGAAGG TGAATGGTAT 3840

TACTTTAACC AAACGGGTAT CTTGTTACAG AATCAATGGA AAAAATGGAA CAATCATTGG 3900

TTCTATTTGA CAGACTCTGG TGCTTCTGCT AAAAATTGGA AGAAAATCGC TGGAATCTGG 3960

TATTATTTTA ACAAAGAAAA CCAGATGGAA ATTGGTTGGA TTCAAGATAA AGAGCAGTGG 4020

TATTATTTGG ATGTTGATGG TTCTATGAAG ACAGGATGGC TTCAATATAT GGGGCAATGG 4080

TATTACTTTG CTCCATCAGG GGAAATGAAA ATGGGCTGGG TAAAAGATAA AGAAACCTGG 4140

TACTATATGG ATTCTACTGG TGTCATGAAG ACAGGTGAGA TAGAAGTTGC TGGTCAACAT 4200

TATTATCTGG AAGATTCAGG AGCTATGAAG CAAGGCTGGC ATAAAAAGGC AAATGATTGG 4260

TATTTCTACA AGACAGACGG TTCACGAGCT GTGGGTTGGA TCAAGGACAA GGATAAATGG 4320

TACTTCTTGA AAGAAAATGG TCAATTACTT GTGAACGGTA AGACACCAGA AGGTTATACT 4380

GTGGATTCAA GTGGTGCCTG GTTAGTGGAT GTTTCGATCG AGAAATCTGC TACAATTAAA 4440

ACTACAAGTC ATTCAGAAAT AAAAGAATCC AAAGAAGTAG TGAAAAAGGA TCTTGAAAAT 4500

AAAGAAACGA GTCAACATGA AAGTGTTACA AATTTTTCAA CTAGTCAAGA TTTGACATCC 4560

TCAACTTCAC AAAGCTCTGA AACGAGTGTA AACAAATCGG AATCAGAACA GTAGTAGAAA 4620

AGAAGGTTTT AGGGCCTTCT TTTTCCTATC AACTCTTTTC TATTTCCTGT TATTCATGTT 4680

ATAATGGATA AATATGAATA ATCGGAGTGA GACTATGAAA TACAAACGGA TTGTCTTTAA 4740

GGTGGGTACT TCTTCTCTGA CAAATGAGGA TGGAAGTTTA TCACGTAGTA AGGTAAAGGA 4800

TATTACCCAG CAGTTGGCTA TGCTGCACGA GGCTGGTCAT GAGTTGATTT TGGTGTCTTC 4860

AGGTGCCATT GCGGCTGGTT TTGGAGCCTT AGGATTTAAA AAGCGTCCGA CTAAGATTGC 4920

TGATAAACAG GCTTCAGCAG CGGTAGGGCA GGGGCTTTTG TTGGAAGAAT ATACAACCAA 4980

TCTTCTCTTG CGTCAAATCG TTTCTGCACA AATCTTGCTG ACCCAAGATG ACTTTGTGGA 5040

TAAGCGTCGT TATAAAAATG CCCATCAGGC TTTGTCGGTT TTGCTCAACC GTGGGGCAAT 5100

TCCTATCATC AATGAGAATG ATAGTGTCGT TATTGATGAG CTCAAGGTTG GGGACAATGA 5160

CACTCTAAGT GCTCAAGTAG CGGCGATGGT CCAAGCAGAC CTTTTAGTTT TCTTGACAGA 5220

TGTGGACGGT CTCTATACTG GAAATCCTAA TTCAGATCCA AGAGCCAAAC GCTTGGAGAG 5280

AATCGAGACC ATCAATCGTG AGATTATTGA TATGGCTGGT GGAGCTGGTT CGTCAAACGG 5340

AACTGGGGGT ATGTTAACCA AAATCAAGGC TGCAACTATC GCGACGGAAT CAGGAGTTCC 5400

TGTTTATATC TGCTCATCCT TGAAATCAGA TTCCATGATT GAGGCGGCAG AGGAGACCGA 5460

GGATGGTTCT TACTTTGTTG CTCAAGAGAA GGGGCTTCGT ACCCAGAAAC AATGGCTTGC 5520

CTTCTATGCT CAGAGTCAAG GTTCTATTTG GGTTGATAAA GGGGCTGCGG AAGCTCTCTC 5580

TCAATATGGA AAGAGTCTTC TCTTATCTGG TATCGTTGAA GCAGAAGGAG TCTTTTCTTA 5640

CGGTGATATC GTGACAGTAT TTGACAAGGA AAGTGGAAAA TCACTTGGAA AAGGACGCGT 5700

GCAATTTGGA GCATCTGCTT TGGAGGATAT GTTGCGTTCT CAAAAAGCCA AGGGTGTCTT 5760

GATTTACCGT GACGACTGGA TTTCCATTAC TCCTGAAATC CAACTACTTT TTACAGAATT 5820

TTAGAGGTAA ACTATGGTGA GTAGACAAGA ACAATTTGAA CAGGTACAGG CTGTTAAAAA 5880

ATCGATTAAC ACAGCTAGTG AAGAAGTGAA AAACCAAGCC TTGCTAGCCA TGGCTGATCA 5940

CTTAGTGGCT GCTACTGAGG AAATTTTAGC GGCTAATGCC CTCGATATGG CAGCGGCTAA 6000

GGGGAAAATC TCAGATGTGA TGTTGGATCG TCTTTATTTG GATGCAGATC GTATAGAAGC 6060

GATGGCAAGA GGAATTCGTG AAGTGGTTGC CTTACCAGAT CCAATCGGTG AAGTTTTAGA 6120

AACAAGTCAG CTTGAAAATG GTTTGGTTAT CACAAAAAAA CGTGTAGCTA TGGGTGTCAT 6180

CGGTATTATC TATGAAAGCC GTCCAAATGT GACGTCTGAT GCGGCTGCTT TGACTCTTAA 6240

GAGTGGAAAT GCGGTTGTTC TTCGTAGTGG TAAGGATGCC TATCAAACAA CCCATGCCAT 6300

TGTCACAGCC TTGAAGAAGG GCTTGGAGAC GACTACTATT CATCCAAATG TGATTCAACT 6360

GGTGGAGGAT ACTAGCCGTG AAAGTAGTTA TGCTATGATG AAGGCCAAGG GCTATCTAGA 6420

CCTTCTCATT CCTCGTGGAG GAGCTGGCTT GATCAATGCA GTGGTTGAGA ATGCGATTGT 6480

ACCTGTTATC GAGACAGGGA CTGGGATTGT CCATGTCTAT GTGGATAAGG ATGCAGACGA 6540

AGACAAGGCG CTGTCTATCA TCAACAATGC TAAAACCAGT CGTCCTTCTG TTTGTAATGC 6600

CATGGAGGTT CTGCTGGTTC ATGAAAACAA GGCAGCAAGC TTCCTTCCTC GCTTGGAGCA 6660

AGTGTTGGTT GCAGAGCGTA AGGAAGCTGG ACTGGAACCA ATTCAATTCC GCCTAGATAG 6720

CAAAGCAAGC CAGTTTGTTT CAGGTCAAGC AGCTGAGACC CAAGACTTTG ACACCGAGTT 6780

TTTAGACTAT GTCCTTGCTG TTAAGGTTGT GAGCAGTTTA GAAGAAGCGG TTGCGCACAT 6840

TGAATCCCAC AGCACCCATC ATTCGGATGC TATTGTGACG GAAAATGCTG AAGCTGCAGC 6900

ATACTTTACA GATCAAGTGG ACTCTGCAGC GGTGTATGTT AATGCCTCAA CTCGTTTCAC 6960

AGATGGAGGA CAATTTGGTC TTGGTTGTGA AATGGGGATT TCTACTCAGA AATTGCACGC 7020

GCGTGGTCCC ATGGGCTTGA AAGAGTTGAC CAGCTACAAG TATGTGGTTG CCGGTGATGG 7080

GCAGATAAGG GAGTAAGAGA TGAAGATTGG ATTTATCGGT TTGGGGAATA TGGGTGCTAG 7140

CTTGGCAAAA TCTGTCTTGC AGACTAGGAC GTCAGATGAG ATTCTCCTTG CCAATCGTAG 7200

TCAAGCTAAG GTAGATGCTT TCATTGCAGA CTTTGGTGGT CAGGCTTCCA GCAATGAAGA 7260

AATGTTTGCA GAAGCAGATG TGATTTTTCT AGGAGTTAAG CCTGCTCAGT TTTCTGAACT 7320

GCTTTCTCAA TACCAGACCA TCCTTGAAAA AAGAGAAAGT CTTCTTTTGA TTTCGATGGC 7380

AGCTGGATTG ACCTTAGAAA AACTAGCAAG TCTTATCCCA AGTCAACACC GAATTATTCG 7440

TATGATGCCT AATACCCCTG CTTCTATCGG GCAAGGAGTG ATTAGTTATG CCTTGTCTCC 7500

TAATTGCAGG GCTGAGGACA GTGAGCTCTT TTATCAGCTT TTAGCCAAGG CTGGTCTCTT 7560

GGTTGAACTA GGAGAAAGTT TAATCGATGC AGCGACAGGT CTTGCAGGTT GTGGACCAGC 7620

CTTTGTCTAT CTTTTTATCG AGGCCTTGGC AGATGCAGGT GTTCAGACAG GATTACCACG 7680

AGAAATAGCA TTGAAAATGG CAGCACAAAC TGTGGTAGGA GCTGGGCAAT TGGTCCTTGA 7740

AAGTCAGCAA CATCCTGGAG TATTGAAAGA CCAAGTCTGT AGCCCAGGCG GTTCGACTAT 7800

CGCTGGTGTA GCAAGCCTAG AAGCGCATGC TTTCCGAGGA ACAGTCATGG ATGCAGTTCA 7860

TCAAGCCTAC AAACGAACAC AAGAACTAGG TAAATAAGAG GTAGTTTTGA CTGCCTCTTT 7920

TATGGTGGCT GAAATGAGAA GACACAAAAA GATTGTCACA AACCCCTATT TTTTTGATAG 7980

AATAGAAGTA GTAAAAAAGA AATGAGTTAG ACATGTCAAA AGGATTTTTA GTCTCTCTTG 8040

AGGGACCAGA GGGAGCAGGC AAGACCAGTG TTTTAGAGGC TCTGCTACCA ATTTTAGAGG 8100

AAAAAGGAGT AGAGGTGTTG ACGACCCGTG AACCTGGCGG AGTCTTGATT GGGGAGAAGA 8160

TTCGGGAAGT GATTTTGGAT CCAAGTCATA CTCAGATGGA TGCTAAAACA GAGCTACTTC 8220

TCTATATTGC CAGTCGCAGA CAGCATTTGG TGGAAAAAGT TCTTCCAGCC CTTGAAGCTG 8280

GCAAGTTGGT CATCATGGAT CGTTTTATCG ATAGTTCTGT TGCCTATCAG GGATTTGGTC 8340

GTGGCTTAGA TATTGAAGCC ATTGACTGGC TCAATCAGTT TGCGACAGAT GGCCTCAAAC 8400

CCGATTTGAC ACTCTATTTT GACATCGAGG TGGAAGAAGG GCTGGCTCGT ATTGCTGCTA 8460

ATAGTGACCG CGAGGTTAAT CGTTTGGATT TGGAAGGGTT GGACTTGCAT AAAAAAGTTC 8520

GTCAAGGCTA CCTTTCTCTT CTGGATAAAG AGGGAAATCG CATTGTCAAG ATTGATGCTA 8580

GTCTCCCTTT GGAGCAAGTT GTGGAAACTA CCAAGGCTGT CTTGTTTGAC GGAATGGGCT 8640

TGGCCAAATG AAACAAGATC AACTAAAGGC TTGGCAACCA GCTCAGTTTG ACCGTTTTGT 8700

CCGTATCTTA GAACAAGACC AGCTCAATCA CGCCTATCTC TTTTCAGGTT TCTTTGAAAG 8760

CTTGGAAATG GCGCAATTTT TAGCTAAGAG CCTCTTTTGT ACGGATAAAG TTGGCGTCTT 8820

ACCATGTGAG AAATGCCGAA GTTGCAAGCT GATTGAACAG GGAGAATTTC CCGATGTCAC 8880

CTTGATTAAA CCAGTTAATC AGGTCATTAA GACGGAACGC ATTCGAGAAT TGGTGGGTCA 8940

GTTTTCTCAA GCAGGGATTG AAAGCCAGCA ACAGGTCTTT ATCATCGAGC AAGCGGATAA 9000

AATGCATCCC AACGCAGCCA ATTCTCTGCT CAAGGTCATC GAAGAACCCC AGAGTGAAGT 9060

TTATATTTTC TTCTTGACTA GCGATGAGGA AAAGATGTTA CCGACAATCC GAAGTCGGAC 9120

TCAGATCTTC CACTTTAAAA AGCAAGAAGA AAAACTTATC TTACTCTTAG AACAAATGGG 9180

ACTTGTTAAG AAAAAAGCGA CTCTTTTAGC TAAGTTTAGT CAATCGCGAG CTGAAGCAGA 9240

AAAGTTGGCT AATCAGGCAA GTTTTTGGAC CTTGGTCGAT GAAAGTGAAC GCCTGCTGAC 9300

TTGGTTAGTA GCTAAGAAAA AAGAAAGTTA TCTACAGGTT GCCAAATTAG CCAACTTGGC 9360

AGATGATAAG GAAAAACAGG ATCAGGTTTT ACGGATTCTT GAAGTTCTCT GTGGGCAGGA 9420

CCTCTTGCAG GTAAGAGTAA GAGTGATTCT ACAAGATTTA CTAGAAGCTA GAAAAATGTG 9480

GCAAGCTAAT GTCAGCTTTC AAAATGCCAT GGAATATCTG GTCTTGAAAG AAATATAAAC 9540

TCAAAAATGA ATGATAAAGA AAGGAAAGGG CTGTTTTATG GACAAAAAAG AATTATTTGA 9600

CGCGCTGGAT GATTTTTCCC AACAATTATT GGTAACCTTA GCCGATGTGG AAGCCATCAA 9660

GAAAAATCTC AAGAGCCTGG TAGAGGAAAA TACAGCTCTT CGCTTGGAAA ATAGTAAGTT 9720

GCGAGAACGC TTGGGTGAGG TGGAAGCAGA TGCTCCTGTC AAGGCCAAGC ATGTTCGTGA 9780

AAGTGTCCGT CGCATTTACC GTGATGGATT TCACGTATGT AATGATTTTT ATGGACAACG 9840

TCGAGAGCAG GACGAGGAAT GTATGTTTTG TGACGAGTTG CTATACAGGG AGTAGGCATG 9900

CAGATTCAAA AAAGTTTTAA GGGGCAGTCT CCCTATGGCA AGCTGTATCT AGTGGCAACG 9960

CCGATTGGCA ATCTAGATGA TATGACTTTT CGTGCTATCC AGACCTTGAA AGAAGTGGAC 10020

TGGATTGCTG CTGAGGATAC GCGCAATACA GGGCTTTTGC TCAAGCATTT TGACATTTCC 10080

ACCAAGCAGA TCAGTTTTCA TGAGCACAAT GCCAAGGAAA AAATTCCTGA TTTGATTGGT 10140

TTCTTGAAAG CAGGGCAAAG TATTGCTCAG GTCTCTGATG CCGGTTTGCC TAGCATTTCA 10200

GACCCTGGTC ATGATTTAGT TAAGGCAGCT ATTGAGGAAG AAATTGCAGT TGTGACAGTT 10260

CCAGGTGCCT CTGCAGGAAT TTCTGCCTTG ATTGCCAGTG GTTTAGCGCC ACAGCCACAT 10320

ATCTTTTACG GTTTTTTACC GAGAAAATCA GGTCAGCAGA AGCAATTTTT TGGCTTGAAA 10380

AAAGATTATC CTGAAACACA GATTTTTTAT GAATCACCTC ATCGTGTAGC AGACACGTTG 10440

GAAAATATGT TAGAAGTCTA CGGTGACCGC TCCGTTGTCT TGGTCAGGGA ATTGACCAAA 10500

ATCTATGAAG AATACCAACG AGGTACTATC TCTGAGTTAT TAGAAAGCAT TGCTGAAACG 10560

CCACTCAAGG GCGAATGTCT TCTCATTGTT GAGGGTGCCA GTCAGGGTGT GGAGGAAAAG 10620

GACGAGGAAG ACTTGTTCGT AGAAATTCAA ACCCGCATCC AGCAAGGTGT GAAGAAAAAC 10680

CAAGCTATCA AGGAAGTCGC TAAGATTTAC CAGTGGAATA AAAGTCAGCT CTACGCTGCC 10740

TACCACGACT GGGAAGAAAA ACAATAAAGG GAGACAGGAT GTAATAATTC TGTCTGTTTC 10800

TGTTTAACTT AATTAGTGAT GATAATATAA AGATGTATCA CTTGGTATAG AAGCTTTGGT 10860

ATTAAGTTTT TTATTAAGCC CATACGGAAT ACCGATGGTT GGAGCAGCAG TTATAGCGTT 10920

CTTAGAAGGT ATAAATAGAA AAATAAGGTC ATTTTAAATC AAAGGATTGA TAAATCAGAA 10980

AGAAGGTGAT TTTTTGCGAA CATACGAAAA TAAAGAAGAA CTAAAAGCTG AGATAGAGAA 11040

AACATTTGAG AAATATATTT TAGAATTTGA TAATATTCCA GAAAATTTAA AAGATAAGAG 11100

AGCTGATGAA GTTGACAGAA CTCCAGCAGA AAACCTTGCT TATCAGGTTG GTTGGACCAA 11160

CTTGGTTCTT AAATGGGAAG AAGATGAAAG AAAGGGGCTT CAAGTAAAAA CACCATCGGA 11220

TAAATTTAAA TGGAATCAAC TTGGTGAATT ATATCAGTGG TTCACAGATA CCTACGCTCA 11280

TTTATCTCTG CAAGAGTTGA AAGCAAAATT AAATGAAAAT ATTAATTCTA TCTCTGCAAT 11340

GATTGATTCG TTGAGTGAGG AAGAATTATT TGAACCGCAT ATGAGAAAGT GGGCTGATGA 11400

AGCGACTAAA ACAGCGACTT GGGAAGTGTA TAAGTTTATT CATGTAAATA CGGTTGCACC 11460

TTTTGGAACT TTCAGAACTA AAATCAGAAA ATGGAAGAAG ATAGTATTAT AAATTATATT 11520

TTTAACTTTA AAAAATTTCA TAAAAATGGT TACCAAAGGC GATAGAAGAA AAACTATCGT 11580

CTTTTTCTTT GCAAATTTTT AAGAAGGGAG GTGATCTTGC ATGGACTTTG AATATTTTTA 11640

TAACAGAGAA GCGGAAAGAT TTAACTTCTT AAAAGTACCG GAGATATTAG TTGATAGAGA 11700

AGAATTTCGG GGCTTATCAG CAGAAGCAAT TATCCTTTAT TCCATACTTC TTAAACAGAC 11760

AGGAATGTCA TTTAAGAATA ACTGGATAGA CAAGGAAGGC AGAGTATTTA TCTATTTTAC 11820

TGTCGAAGAA ATTATGAAAA GAAGAAATAT CTCAAAGCCA ACTGCCATAA AAACATTAGA 11880

TGAGCTTGAT GTAAAAAAGG AATAGGACTG ATCGAAAGAG TAAGGCTTGG ACTTGGTAAG 11940

CCGAACATCA TTTATGTTAA AGACTTTATG AGTATATTTC AGGTAAAAGA AAATGACTTA 12000

CAGAAGTCAA AAAACTTAAC TTCAGAAGTA AAAGATTTTA ACCTCAGAAG TAAAGAAAAT 12060

GAACTTCAAG AGGTTAAGAA CCTTGACTCT AACTATATAG AGAATAATAA GAGTAAGTAT 12120

AGTAAGAGAG AATATAGTTT TGGTGAAAAC GGACTTGGAA CATTTCAAAA TGTGTTTTTA 12180

GCTGCTGAAG ATATATCGGA TTTACAAATC ATAATGAACT CACAGCTTGA GAATTACATT 12240

AGACTTCCTG CAAAACTAGA ATCCTAGTTC ATGATTGATA ATGCCAGCAA TCAAATTCAT 12300

TCGTAATCCG AAGCGTTTAC GATGATTTCG ATAGATTGTT GAAAACATTT TAAACGTTTT 12360

TACTTTGGCA AAGATGTTCT CAATCTTGCT TCTCTCCTTG GATAGCGCAT GGTTACAGGC 12420

TTTATCTTCA GCTGTTAGCG GCTTGAGTTT GCTGGATTTA CGTGGAGTTT GTACTTGAGG 12480

ATATATCTTC ATGAGCCCTT GATAACCACT GTCAGACAAG ATTTTACCAG CTTGTCCGAT 12540

ATTTCTGCGA CTCATTTTGA ACAACTTCAT ATCACGACAA TAGTTCACAG CGATATCCAA 12600

AGAAACAATT CTCCCTTGAC TTGTGACAAT CGCTTGAGCC TTCATAGCGT GAAATTTCTT 12660

TTTACCAGAA TGATTCGCTA ATTCTTTTTT TAGGGCGATT GATTTTTACT TCCGTCGCAT 12720

CAATCATTAC CGTGTCCTCA GAACTGAGAG GAGTTCTTGA AATCGTAACA CCACTTTGAA 12780

CAAGAGTTAC TTCAACCCAT TGGCTCCGAC GGATTAAGTT GCTTTCGTGA ATACCAAAAT 12840

CAGCCGCAAT TTGTTCATAA GTTCGATATT CTCGCACATA TTGAAGAGTG GCCATAAGAA 12900

GGTCTTCTAG GCTTAATTTA GGTTTTCGTC CACCTTTTGC GTGTTTAAGT TGATAAGCTG 12960

TTTTTAATAC AGCTAATATC TCTTCAAAAG TCGTGCGCTG AACACCAACA AGACGCTTAA 13020

ATCGTGCATC AGTTAGTTGT TTACTTGCTT CATCATTCAT AGAACTACTA TACCATATTT 13080

TGTTTCGCAG GAAGTCTATT GGAAAGTAAG AAATATTGAA GCTGAGGCTA TTAGAAGAAA 13140

TTGTGAGCGT GGTGCTATTT TTTCAGGTAA AATAAAATAT CACGAAGATT CACAGTTTAA 13200

AGGAGATCAC TATGTTGAAT GTTATGCTGT TTTAGATAAT ACGGTTATAG CAAGAGATAG 13260

AATAACAGTC CCTATCGATC CGTTATGTGG AAAAGATTTT ATAGAGTAGC ATATAATTGA 13320

TTCTTAACTG GAATACTCAC TATCTCTTTA CATCAAGAAA ATGACTAAAC AGGGAAGTTT 13380

GCCTTCTTCC CTTTTTTTGT TATACTAGTA GAAGAAAAAA TTAGAAAGAT TTGTGGGTGT 13440

CAAACAGCCC AGTGGGGTGT TTTAATATGG ACTTAGGTCC CACCCAAAGA GGTATTAGTG 13500

TCGTGTCTCA ATCTTATATC AATGTTATCG GTGCTGGTTT GGCAGGTTCT GAAGCAGCTT 13560

ACCAAATCGC AGAGCGTGGT ATTCCAGTTA AACTATATGA AATGCGTGGT GTCAAGTCTA 13620

CACCCCAGCA TAAAACAGAC AATTTTGCTG AGTTGGTTTG TTCCAATTCT TTGCGTGGGG 13680

ATGCTTTGAC AAATGCAGTT GGTCTTCTCA AGGAAGAAAT GCGTCGCTTG GGTTCTGTTA 13740

TCTTGGAATC TGCTGAGGCT ACACGTGTTC CTGCAGGTGG TGCCCTTGCA GTGGACCGTG 13800

ATGGTTTCTC TCAAATGGTG ACCGAAAAAG TTGCCAACCA CCCCTTGATT GAAGTGGTTC 13860

GTGATGAAAT TACAGAATTG CCGACAGATG TTATTACGGT TATCGCTACT GGTCCTTTGA 13920

CAAGTGATGC CTTGGCTGAA AAGATTCATG CTCTTAATGA CGGTGCTGGT TTTTATTTCT 13980

ACGATGCGGC AGCGCCTATT ATCGATGTCA ACACTATCGA TATGAGCAAG GTCTACCTCA 14040

AATCACGTTA TGATAAGGGA GAAGCGGCCT ACCTCAATGC CCCTATGACC AAGCAAGAAT 14100

TTATGGATTT CCATGAAGCT TTGGTCAATG CAGAAGAAGC ACCGCTTAGT TCTTTTGAAA 14160

AAGAAAAGTA CTTTGAAGGA TGTATGCCTA TCGAAGTCAT GGCCAAACGT GGCATTAAAA 14220

CTATGCTTTA TGGCCCTATG AAGCCAGTCG GTCTTGAGTA CCCAGACGAC TATACAGGAC 14280

CTCGTGATGG AGAATTTAAA ACACCTTATG CGGTTGTGCA ACTTCGTCAG GATAATGCAG 14340

CTGGTAGCCT CTACAATATT GTTGGTTTCC AGACCCACCT CAAATGGGGA GAACAAAAGC 14400

GTGTCTTCCA AATGATTCCG GGTCTTGAAA ATGCGGAGTT TGTCCGTTAT GGTGTGATGC 14460

ATCGCAATTC TTACATGGAT TCACCAAATC TTCTTGAGCA GACTTACCGT TCTAAGAAAC 14520

AACCAAATCT CTTCTTTGCT GGTCAAATGA CGGGTGTGGA AGGCTATGTT GAGTCGGCGG 14580

CTTCAGGCTT AGTTGCGGGA ATTAACGCAG CTCGTCTCTT CAAGGAAGAA AGCGAGGCTA 14640

TTTTCCCCGA GACGACAGCG ATTGGAAGCT TAGCTCATTA CATTACCCAT GCCGACAGCA 14700

AACATTTCCA ACCAATGAAT GTCAATTTTG GGATCATCAA GGAGTTGGAA GGCGAGCGTA 14760

TCCGTGATAA GAAGGCTCGT TATGAAAAAA TTGCAGAGCG TGCCCTTGCC GACTTAGAGG 14820

AATTTTTGAC TGTCTAATTT TTTTGAAAGA ATTGCTCATG ATACTATAAA AATCTTAGAA 14880

ATTGTGATAA AATAGGTAGG ATGAAAGAAG GAGAGTGAAA ATGGCGAATC CCAAGTATAA 14940

ACGTATTTTA ATCAAGTTAT CAGGTGAAGC CCTTGCCGGT GAACGTGGCG TAGGGATTGA 15000

TATCCAAACA GTTCAAACAA TCGCAAAAGA GATTCAAGAA GTTCATAGCT TAGGTATCGA 15060

AATTGCCCTT GTTATCGGTG GAGGAAATCT CTGGCGTGGA GAACCTGCAG CAGAAGCAGG 15120

TATGGACCGT GTTCAGGCAG ATTACACAGG AATGCTTGGG ACTGTTATGA ATGCTCTTGT 15180

GATGGCAGAT TCATTGCAAC AAGTTGGGGT TGATACGCGT GTACAAACAG CTATTGCCAT 15240

GCAACAAGTG GCAGAGCCTT ATGTCCGTGG ACGTGCCCTT CGTCACCTTG AAAAAGGCCG 15300

TATCGTTATC TTTGGTGCTG GAATTGGTTC ACCTTACTTC TCGACAGATA CAACAGCGGC 15360

CCTTCGTGCA GCTGAAATCG AAGCAGATGC CATCCTCATG GCTAAAAATG GTGTCGATGG 15420

TGTTTACAAT GCCGATCCTA AGAAAGATAA GACAGCTGTT AAGTTTGAAG AATTGACCCA 15480

CCGTGACGTT ATCAATAAAG GTCTTCGTAT CATGGACTCA ACAGCTTCAA CCCTCTCAAT 15540

GGACAACGAC ATTGACTTGG TTGTATTCAA CATGAACCAA CCAGGCAACA TCAAACGTGT 15600

CGTATTTGGT GAAAATATCG GAACAACAGT TTCAAATAAT ATCGAAGAAA AGGAATAAGA 15660

AAGAATATGG CTAACGCAAT TATTGAAAAA GCTAAAGAGA GAATGACCCA GTCTCACCAA 15720

TCACTTGCTC GTGAATTTGG TGGTATCCGT GCTGGTCGTG CCAATGCAAG CTTGCTTGAC 15780

CGTGTACATG TAGAATACTA TGGAGTCGAA ACTCCTCTTA ACCAAATCGC TTCAATTACG 15840

ATTCCAGAAG CGCGTGTTTT GTTGGTAACA CCATTTGACA AGTCTTCATT GAAAGACATC 15900

GAACGTGCCT TGAACGCTTC TGATATTGGT ATCACACCGG CTAATGACGG TTCTGTGATT 15960

CGCTTGGTTA TCCCAGCTCT TACAGAAGAA ACTCGTCGTG ACCTTGCTAA AGAAGTGAAG 16020

AAGGTCGGCG AAAATGCTAA AGTGGCTGTC CGCAATATCC GTCGCGATGC TATGGACGAA 16080

GCTAAGAAAC GAGAAAAAGC AAAAGAAATC ACTGAAGACG AATTGAAGAC TCTTGAAAAA 16140

GACATTCAAA AAGTAACAGA CGATGCTGTT AAACACATCG ACGACATGAC TGCTAACAAA 16200

GAGAAAGAAC TTTTGGAAGT CTAAAAATAA ACAGAAAAAC TCAGTTGGCA TTGCTGGCTG 16260

AGTTTTATTC GAAAGAAGGA AATATGAATA CAAATCTTGC AAGTTTTATC GTTGGACTGA 16320

TCATCGATGA AAACGACCGT TTTTACTTTG TGCAAAAGGA TGGTCAAACC TATGCTCTTG 16380

CTAAGGAAGA AGGCCAACAT ACAGTAGGGG ATACGGTCAA AGGTTTTGCA TACACGGATA 16440

TGAAGCAAAA ACTCCGCCTG ACAACCTTAG AAGTGACTGC CACTCAGGAC CAATTTGGTT 16500

GGGGACGTGT CACAGAGGTT CGTAAGGACT TGGGTGTCTT TGTGGATACA GGCCTTCCTG 16560

ACAAGGAAAT CGTTGTGTCA CTCGATATTC TCCCTGAGCT CAAGGAACTC TGGCCTAAGA 16620

AGGGCGACCA ACTCTACATC CGTCTTGAAG TGGATAAGAA AGACCGTATC TGGGGCCTCT 16680

TGGCTTATCA AGAAGACTTC CAACGTCTTG CTCGTCCTGC CTACAACAAC ATGCAGAACC 16740

AAAACTGGCC AGCCATTGTT TACCGTCTCA AGCTGTCAGG AACTTTTGTT TACCTACCAG 16800

AAAATAATAT GCTTGGTTTT ATTCATCCTA GCGAGCGTTA CGCAGAGCCA CGTTTGGGGC 16860

AAGTATTAGA TGCGCGCGTT ATTGGTTTCC GTGAAGTGGA CCGCACTCTG AACCTCTCCC 16920

TCAAACCACG CTCCTTTGAA ATGTTGGAAA ACGATGCTCA GATGATTTTG ACTTATTTGG 16980

AAAGCAATGG CGGTTTCATG ACCTTAAATG ACAAGTCATC TCCAGACGAC ATCAAGGCAA 17040

CCTTTGGCAT TTCTAAAGGT CAGTTCAAGA AAGCTTTAGG TGGTCTTATG AAGGCTGGTA 17100

AAATCAAGCA GGACCAGTTT GGGACAGAGT TGATTTAGGG AGGCTTATGA GAAAATCATT 17160

TTACACTTGG CTCATGACCG AGCGCAATCC TAAAAGTAAC AGTCCCAAAG CAATTTTGGC 17220

AGACCTCGCT TTTGAAGAGT CAGCCTTTCC AAAACACACA GATGATTTTG ATGAGGTCAG 17280

TCGCTTTTTG GAGGAGCATG CCAGTTTCTC TTTTAACCTA GGAGATTTTG ACAGCATTTG 17340

GCAGGAATAT CTAGAACACT AGCATTTATT CATTGGGTTT GGGCTAGTAA TTTCTCCATC 17400

CCTCTGCTAT AATAAAAAGA AATAAAAGGA TTAGAGAGGT TCTTTATTTG AAGGAACATT 17460

CAATAGACAT TCAACTGAGT CATCCAGATG ACCTGTTTCA TCTTTTTGGT TCCAATGAAC 17520

GCCATCTTCG TTTGATGGAA GAAGAGCTTG ATGTTGTGAT TCATGCTCGT ACGGAGATTG 17580

TCCAGGTTTT GGGAGAAGAG TCTGCCTGTG AGGAAGCCCG TCAAGTTATT CAGGCTTTGA 17640

TGGTCTTGGT AAATCGTGGG ATGACCGTTG GTACGCCAGA TGTAGTCACT GCGATTAGCA 17700

TGGTCAAAAA TGATGAAATT GACAAGTTTG TCGCCCTTTA CGAAGAAGAA ATTATCAAGG 17760

ATAATACTGG GAAACCTATC CGTGTCAAAA CCCTAGGGCA AAAGCTTTAT GTGGACAGTG 17820

TCAAACAGCA TGATGTGACC TTTGGAATTG GGCCAGCAGG TACAGGGAAG ACCTTCCTTG 17880

CAGTGACCTT GGCAGTGACT GCCCTTAAAC GTGGGCAAGT CAAGCGAATT ATCCTAACTC 17940

GTCCAGCGGT GGAAGCGGGA GAGAGTCTTG GATTTCTTCC GGGTGATCTT AAGGAGAAGG 18000

TGGATCCTTA CCTTCGTCCT GTTTACGATG CCTTGTATCA AATTCTTGGG AAAGACCAAA 18060

CGACTCGTCT CATGGAGCGT GAAATTATCG AAATTGCGCC CCTTGCCTAT ATGCGTGGCC 18120

GGACCTTGGA TGATGCCTTT GTCATTCTCG ATGAGGCGCA AAACACGACC ATCATGCAGA 18180

TGAAGATGTT CTTGACGCGT TTAGGTTTTC ATTCTAAGAT GATTGTCAAT GGAGATATTA 18240

GTCAGATTGA CCTGCCACGT AATGTCAAGT CCGGTTTGAT TGATGCTCAA GAGAAACTCA 18300

AGAACATCCA TCAGATTGAC TTTGTTCATT TTTCAGCCAA GGATGTGGTT CGCCATCCTG 18360

TTGTCGCTCA GATTATCCGA GCCTATGAAT ATTCTACTGA AGTTGCACAC GACTGATTTT 18420

GAGGAAGTTC GCCTGCAAAA GAATAGACTT GTTCGGTAAC TGTAAAAAGT GTTATACTAT 18480

TTTTATGGAA ACAGTATACG ACAAAGCACA AAAACTTAAC TCAAAAAACT TCAAACTATT 18540

GATTGGTGTC AAAAAGGAAA CCTTTCAACT CATGCTAGAA CACCTGAATT CAGCCTATCA 18600

GATTCAGCAC CGAAAAGGTG GACGTCCACG TAGTCTGCCC ATGGAAGACC AGCTCATTAT 18660

GACCCTCCGT TACTTGCGAT ATTATCCCAC TCAGCGTCTG CTGGCCTTTG ATTTTGGCGT 18720

CGGTGTAGCT ACGGTAAATG CCATCATCAC TTGGGTGGAG GATACACTTC GTGCGTCAGG 18780

TAGCTTTGAT TTGGACCATT TAGAAGCCCC GAGTGCTGCT GTGGCTATTG ACGTGACCGA 18840

AAGTCCGATT CAGCGTCCAA ACAAAACCAA AGCAAAAATT ATTCTGGTAA AAAGAAACGA 18900

CACACCTTAA AAACTCAAAT TATGCTGGAT TTGACGACAC ATAAAGTCTG TCAAATGGCC 18960

TTTTCTGACG GACATACGCA TGATTTTACT CTCTTCAAAG AAAGTATTGG ACAAAGTTTG 19020

CCTGAAACGA CGCTTGCCTT TGTTGACCTA GGTTATTTAG GCATCTTGAA ATTTCATGAG 19080

AATACTTTCA TTCCTGCTAA AAATTCCAAA AATCGCCGCC TGAGTGAGGA TGATAAGCAG 19140

TTAAATAAAG AGATGTCAGC GATACGAATT GAAATTGAAC ATTTTAACGC TAAATTCAAG 19200

ACCTTCCAAA TCATGTCAGT CCCTTATCGT AACCGCAGAA AACGTTTCGA GTTACGGGCG 19260

GAATTAATTT GTGCCATCAT CAATTATGAA GTGAACTAGA TTCCGAACAA GTCTAATATA 19320

CTTTTGAGAG AGGAAAATCC AGTTGTATAG GCTAAAGGTT TTATCCAAAG GTCTGAGACA 19380

ACGATTAGGC ACGATGGAAA GAACTTTTAT GTGGCTGATG ACGATCAGTG CATCTTCCTG 19440

TGTCATAATC ACAGGGCACA AGAAAGTAGG AATTTGAAAA GATGATTGAC CAACTATCTA 19500

AGTATTACAG TTGTAGGATA CTAACTGAAA AGGATATTCC AAGTATTTTA TCTTTATATG 19560

AAAGTAATCC TCTGTATTTT CAGCATTGTC CACCAGAGCC AAATTTTGCA ACTGTAAAAG 19620

AGGACATGCT TTGTCTACCT GAAGGTAAAG CTAAGGCTGA TAAGTTTTTT GTTGGATTTT 19680

GGAATGGATC TGACCTTGTG GCTGTTATGG ATTTTGTCTA TGCATATCCT GATGAGGAGA 19740

CTGTTTTTAT TGGTTTGTTT ATGGTTGATC AAGCCTATCA GAGAAAAGGG ATTGGTAGTC 19800

ATATTGTGAC AGAAGCACTA GCTTATTTTG CTAAGAACTT TCGAAAGGCA CGTTTGGCTT 19860

ATGTTAAGGG AAATCCGCAA TCTCAGCATT TTTGGGAAAA GCAGGGCTTT AAATCAATTG 19920

GATGCGAGGT TAAGCAAGAA CTCTATACGG TTGTTATCGC TGAACAGAGC CTAGAAGATT 19980

AGAAATGGCA TCAAGTAAGA ACTATTTGGA ATTTGTTTTG GAACAATTAT CAGGATTAGA 20040

TGATGTGACT TACCGTTCCA TGATGGGGGA GTATATTCTT TACTTCCGCG GCAAGATTAT 20100

TGGCGGCATT TATGACGATC GCTTTTTAGT TAAACCCGTG CAAGCAGTCT TAGATAAGAT 20160

TGACCAATCT TCTTTTGAGT TTCCATACAA AGGTGCCAAA GAAATGATTT GAGTGGAAGA 20220

ACTTGATAAT AAGATGTTTC TATAAGACCT AATTTTAGCT ATGTATAACC AACTGCCAAC 20280

GCCCAAACCT AAAAAGAAAA AGCAAGGGTG AACGAAGTAA AAAAGAAGTC TGCTAAGGCC 20340

CTGTCTTTGC ACGGGTAAAA TTTTATATAT AAAAAGAAGC TGGGACTAAA GAGCTCAGCT 20400

TCCTTTGGTT TATATAATTG TCATTACAAG ACGAAGTGGT TGGGCGAAAC TCTGTTGACT 20460

TTATTCAATT TAGAGTTTCT TATGCACAAT TGAGTCTGGA ACGAAAGTCT CCAGTTGCAA 20520

AGTATACAGT ACAATAAACC AACGATGTAA TAGCTGATGA CACAAAGCAC AGTGGGTAGG 20580

ACTTGCGAAG TCACCCTTTT CTTTTCAAAA TTTATACTAA ATCATTGATA TCAGTGTAGT 20640

CACGATTAAG TCCTTGAGCA ACTGGTAGGT TAGTCAAGTA ACCTTGATAA GTAGTCACAC 20700

CTTGACGCAA GCCTTCATCT TCAGAGATTG CTTGTGCGAA TCCTTTGCCA GCCAAAGCTT 20760

CGATATAAGG AAGAGTGACA TTGGTTAGGG CGATGGTTGA AGTGCGAGCA ACCGCACCAG 20820

GGATATTGGC AACGGCATAG TGGAGAACAC CGTGTTTTTC ATAGACGGGT TCATCGTGCG 20880

TTGTCACACG GTCAGCTGTT TCGATAACGC CACCTTGGTC AACAGCAACG TCAACGATAC 20940

AGAGCCTGGA CGCATTTGTT TGACCATCTC ATCTGTCACC AATTCCGGTG CTTTTGCACC 21000

AGGGATGAGA ATGGCTCCAA TCACCACATC AGCATCTCTC ACACTTGCTT CAATGTTGAA 21060

TGAATTAGAC ATAAGAGTTT GAATTTGACT TCCAAAGACT TCTTCTAGAA CTGAGAGACG 21120

CTTGGAACTA ATATCTAAAA TAGTCACTTG AGCACCAAGA CCAAGGGCGA TGCGGGCAGC 21180

ATGTGTACCG ACGACACCAC CACCGATGAT AGTTACTTTT CCTTTTGGAA CACCTGGTAC 21240

ACCACCAAGT AGAACACCAG AGCCACCAGC TTGCTTAGTA AGGAAGTGAG CTCCGATTTG 21300

AACAGCCATA CGACCTGCAA CCTCACTCAT AGGAACGAGG AGCGGTAGTT GTCCTTGATT 21360

GTCACGAACA GTTTCAGTTG TTTTTGCTGT TAACATAGCA TCTGCTAATT CTGGAGCAGC 21420

GGCCATGTGC AAGTAGGTGA AGAGAAGAAG ATCGTCGCGC AAGTAACCGT ATTCAGAACT 21480

TAAAGATTCT TTTACTTTCA CAACCAACTC TGCTGCCCAA GCTTCACCAG CAGTAGCGAC 21540

AATCTCAGCT CCTTGCTTTT GATAGTCAGC ATCAGTAAAG CCAGAACCGA GACCAGCATT 21600

TGTTTCGATA AGGACACGAT GACCACGACT AACTAAGCTA TGAACACCTG CAGGTGTGAG 21660

GGCGACACGG TTTTCGTTAT TTTTAATTTC TTTTGGGATT CCGATTAACA TTGAGATAAC 21720

CTACCTTTCA ATTGACGGTC TTGTTTTGGT TGTCACATTC CAGTTCATAA ATCAAAAATG 21780

TGACGGTTTC ATTGTATATG AAACCGCTTC AAAAATCAAG AAAAACTTGT CATCCAAATT 21840

TTTTTATGCT AGACTAGTGA AAATCAAGCT CTAATGGAGG GAAAAGTATG GAATCAATAT 21900

TTGTGAAATT TGCCCAGTAT CCGTCTATAG AAACGGAGCG TTTATTGCTC AGACCTGTAA 21960

CTTTGGATGA TGCGGAAcAA TGTTTGACTA TGCCTCGGAC AAGGGTAATA CACGTTACAC 22020

TTTTCCAACC AATCAAAGCT TGGAAGAAAC CAAGAATAAC ATTGCTCAGT TCTACTTGGC 22080

TAATCCCTTG GGACGTTGGG GAATAGAACT AAAAAGCAAT GGTCAGTTTA TTGGAACCAT 22140

TGACTTGCAC AAGATTGATT CTGTTCTTAA GAAGGCAGCT ATTGGCTACA TTATCAATAA 22200

AAAGTATTGG AATCAAGGAT TAACGACAGA AGCCAATCGT GCTGTGATTG AGCTAGCTTT 22260

TGAGAAGATA GGGATGAATA AGTTGACTGC CCTTCACGAT AAGGCTAATC CCGCGTCAGG 22320

AAAGGTCATG GAGAAATCAG GCATGCGTTT TTCCCATGCA GAACCATATG CTTGTATGGA 22380

CCAGCATGAA AAAGGCCGAA TCGTGACAAG AGTTCATTAT GTCTTGACCA AGGAAGACTA 22440

TTTTGCAAAT AAATAAGCAG TTGAAAAGAA ATTTTTCGAC TGTTTTTTCT TCCTCTTACG 22500

AATAATCTAA GAGAGGAGAA AATATGGAAG CAATTATCGA GAAAATCAAA GAGTATAAAA 22560

TCATCGTCAT CTGTACTGGT CTGGGCTTGC TTGTAGGAGG ATTTTTCCTG CTAAAACCAG 22620

CTCCACAAAC ACCTGTCAAA GAGACGAATT TGCAGGCTGA AGTTGCAGCT GTTTCCAAGG 22680

ACTCATCGAC CGAAAAGGAA GTGAAGAAGG AAGAAAAGGA AGAACCCCTT GAACAAGATC 22740

TAATCACAGT AGATGTCAAA GGTGCTGTCA AATCGCCAGG GATTTATGAC TTGCCTGTAG 22800

GTAGTCGAGT CAATGATGCT GTTCAGAAGG CTGGTGGCTT GACAGAGCAA GCAGACAGCA 22860

AGTCGCTCAA TCTAGCTCAG AAAGTTAGTG ATGAGGCTCT GGTTTACGTT CCTACTAAGG 22920

GAGAAGAAGC AGTTAGTCAA CAGACTGGTT CGGGGACAGC TTCTTCAACA AGCAAGGAAA 22980

AGAAGGTCAA TCTCAACAAG GCCAGTCTGG AAGAACTCAA GCAGGTCAAG GGACTGGGAG 23040

GAAAACGAGC TCAGGACATT ATTGACCATC GTGAGGCAAA TGGCAAGTTC AAGTCAGTAG 23100

ACGAGCTCAA GAAGGTCTCT GGCATTGGTG GCAAAACAAT AGAAAAGCTT AAAGACTATG 23160

TTACAGTGGA TTAAGAATTT CTCTATTCCC CTAATTTACC TGAGTTTTCT ATTACTTTGG 23220

CTTTATTACG CTATTTTCTC AGCATCTTAT CTTGCTTTGT TGGGCTTTGT TTTTCTGCTA 23280

GTCTGTCTCT TTATCCAATT TCCGTGGAAA TCTGCTGGTA AAGTTCTAAT AATTTGCGGA 23340

ATCTTTGGAT TTTGGTTTGT TTTTCAAAAT TGGCAACAGA GTCAAGCGAG TCAAAATCTG 23400

GCGGATTCTG TTGAAAGGGT ACGGATTTTG CCTGATACTA TTAAGGTTAA TGGTGATAGT 23460

CTATCCTTTC GTGGCAAGTC TAACGGTCGT GCTTTCCAAG TCTATTATAA ACTCCAGTCC 23520

GAGGAGGAGA AAGAAGCCTT TCAAGCTTTA ACTGACCTGC ATGAGATAGG ACTAGAAGGG 23580

AAGCTTTCGG AGCCAGAAGG GCAGAGAAAT TTTGGTGGCT TTAATTACCA AGCCTATCTG 23640

AAGACTCAGG GAATTTACCA GACTCTCAAT ATCAAAACAA TCCAGTCACT TCAAAAGATT 23700

GGCAGTTGGG ATATAGGAGA AAACTTGTCC AGTTTACGTC GAAAGGCTGT GGTTTGGATT 23760

AAGACGCACT TTCCAGACCC TATGGGCAAT TACATGACAG GACTCTTGCT GGGACATCTG 23820

GACACCGACT TTGAGGAGAT GAATGAGCTT TATTCCAGTC TAGGAATTAT CCACCTCTTT 23880

GCCCTATCTG GCATGCAGGT AGGTTTTTTC ATGAATGGAT TTAAGAAACT TCTCTTGCGA 23940

TTGGGCTTGA CCCAAGAAAA GTTGAAATGG CTGACTTATC CCTTTTCCCT TATCTATGCG 24000

GGACTAACTG GATTTTCAGC ATCGGTTATT CGCAGTCTCT TGCAAAAGCT ACTGGCTCAA 24060

CATGGGGTTA AGGGCTTGGA TAATTTTGCC TTGACGGTGC TTGTCCTCTT TATTGTCATG 24120

CCAAACTTTT TCTTGACAGC AGGAGGAGTC TTGTCCTGCG CTTATGCTTT TATCCTGACC 24180

ATGACCAGCA AAGAAGGGGA GGGGCTCAAG GCTGTTACTA GTGAAAGTCT AGTCATCTCC 24240

TTGGGCATAT TGCCCATTCT ATCCTTCTAT TTTGCGGAAT TTCAACCTTG GTCTATCCTT 24300

TTGACCTTTG TCTTTTCCTT TCTTTTTGAC TTGGTCTTCT TACCGCTCTT GTCTATCTTA 24360

TTTGTCCTTT CCTTTCTCTA TCCAGTCATT CAGCTGAACT TTATCTTTGA ATGGTTAGAG 24420

GGCATTATTC GCTTGGTCTC GCAGGTGGCA AGGAGACCAC TTGTCTTTGG TCAACCCAAC 24480

GCATGGCTTT TAATCTTATT GTTAATTTCC TTGGCTTTGG TCTATGATTT GAGGAAAAAC 24540

ATTAAAGGAT TAACAGTATT GAGTTTATTG ATTACAGGTC TCTTTTTCCT TACCAAGTAT 24600

CCACTGGAAA ATGAAATCAC CATGCTGGAT GTGGGGCAAG GAGAAAGTAT TTTCTACGGG 24660

ATGTAACTGG GAAAACCATT CTCATAGATG TAGGTGGTAA GGCAGAATCT TATAAGAAAA 24720

TCAAAAAATG GCAAGAAAAG ATGACGACCA GCAATGCCCA GCGAACCTTG ATTCCCTATC 24780

TCAAAAGTCG AGGAGTAGCT AAGATTGACC AGCTAATTTT GACTAACACG GACAAGGAGC 24840

ATGTTGGAGA TTTGTCAGAG ATGACCAAGG CTTTCCATGT AGGGGAGATT CTAGTATCAA 24900

AAGACAGTCT GAAACAGAAG GAATTTGTGG CAGAACTACA GGCGACTCAA ACAAAGGTGC 24960

GTAGTATGAT AGTAGGGGAG AACTTGCCCA TTTTTGGAAG TCAGTTAGAA GTTCTATCTC 25020

CAAGGAAAAT GGGAGATGGA GGACACGATG ATACCCTAGT TCTGTATGGG AAATTCTTGG 25080

ATAAGCAATT TCTCTTCACG GGAAATTTGG AGGAGAAAGG AGAGAAGGAC TTGCTGAAGC 25140

ACTATCCAGA CTTGAAAGTA AATGTTTTGA AAGCTAGCCA ACATGGCAAT AAAAAATCAT 25200

CAAGTCCAGC CTTTCTAGAA AAACTCAAAC CAGAGCTTAC TCTTATCTCA GTTGGAAAGA 25260

GCAATCGAAT GAAACTCCCC CATCAGGAAA CATTGACACG ACTGGAAGGT ATCAATAGCA 25320

AAGTTTATCG AACTGACCAG CAAGGAGCTA TACGTTTTAA GGGGTTGGAT AGTTGGAAAA 25380

TCGAAAGTGT TCGATAGGAA GGATAAATGT TGTAGATTAG TGAAATAAAC TAAAAATTTG 25440

TTGCATAATA ATGATAAAAA TGGTATAATG AAAACGTATT CAATATTGAG GATATAAAAT 25500

CATTAAAAAT CAGCAAAAGT TGTTTTATTA GTTAGTTTAT AATCTATTGG TCTTCTTCAG 25560

TCCAGTGTAT CTGCTGTGAC AGTCACTAAA AGTTACAAGT ATGATTGGAA TACGGTTTGG 25620

GAATATAGTA CCAACTATCA CGACCATCAG TATGCTTGGA TTCCGTCATG GTCTCGTTAT 25680

GACAGCTATT CTGAGTATAA AGTTGGCGGA GGCTGGAACT ACGCTCGTTA TGAGGTCATA 25740

AACTATTACA GCGGAGGCTA TTAATTCTTA AAGAGTGAGA AAAAGGAGGG CTAGATATGT 25800

TGCAGCTTAC TCATGTGACC TTAAAAACGC GACAAGTCAT CTTGCAAGAT GTGGATTTCA 25860

CCTTTAAAAA GGGTAGGGTT TATGGTCTTC TTGCTATCAA TGGCTCTGGA AAGACGACCC 25920

TGTTCCGTGC CATTAGCAAT TTAATTCCCA TAAGTAGTGG AAATATCGCA GCCCCTCCTT 25980

CTTTATTTTA TTATGAGAGT ATTGAATGGC TGGATGGAAA CTTAAGTGGG ATGGACTACC 26040

TTCGTCTTAT CAAAAACATC TGGAAGTCAG GTCTGAACTT GAGGGATGAA ATCGCCTATT 26100

GGGAAATGTC TGACTATATC AGTCTTCCCA TTCGCAAGTA TTCCTTAGGC ATGAAGCAAC 26160

GCTTGGTGAT TGCCATGTAT TTCCTCAGTC AGGCCAAATG CTGGCTCATG GATGAGATTA 26220

CAAATGGCTT AGATGAGTAT TATCGACAGA AGTTTTTTGA TAGGCTAGCA CAAATCGATA 26280

GACAAGAACA GCTGGTTCTT TTAAGTTCCC ACTATAAGGA AGAGTTGGTT GATGTCTGCG 26340

ATAGAGTAGT AACCATTCAT CAGGGGCAGA TAGAAGAGGT TTAGTTTATG AAAGATGTTA 26400

GTCTATTTTT ATTGAAAAAA GTTTTCAAAA GCCGCTTAAA CTGGATTGTC TTAGCTTTAT 26460

TTGTATCTGT ACTCGGTGTT ACCTTTTATT TAAATAGTCA GACTGCAAAC TCACACAGCT 26520

TGGAGAGCAG GTTGGAAAGT CGCATTGCAG CCAACGAGAG GGCTATCAAT GAAAATGAAG 26580

AGAAACTCTC CCAAATGTCT GATACCAGCT CGGAGGAATA CCAGTTTGCT AAAAATAATT 26640

TAGACGTGCA AAAAAATCTT TTGACGCGAA AGACAGAAAT TCTGACTTTA TTAAAAGAAG 26700

GGCGCTGGAA AGAAGCCTAC TATTTGCAGT GGCAAGATGA AGAGAAGAAT TATGAATTTG 26760

TATCAAATGA CCCGACTGCT AGCCCTGGCT TAAAAATGGG GGTTGACCGC GAACGGAAGA 26820

TTTACCAAGC CCTGTATCCC TTGAACATAA AAGCACATAC TTTGGAGTTT CCGACCCACG 26880

GGATTGATCA GATTGTCTGG ATTTTAGAGG TTATCATCCC AAGTTTGTTT GTGGTTGCTA 26940

TTATTTTTAT GCTAACACAA CTATTTGCAG AAAGATATCA AAATCATCTG GACACAGCTC 27000

ACTTATATCC TGTTTCAAAA GTGACATTTG CAATATCCTC TCTTGGAGTT GGAGTGGGAT 27060

ATGTAACTGT GCTGTTTATC GGAATCTGTG GCTTTTCTTT TCTAGTGGGA AGTCTGATAA 27120

GTGGTTTTGG ACAGTTAGAT TATCCCTACC CAATTTATAG CTTAGTGAAT CAAGAAGTAA 27180

CTATTGGGAA AATACAAGAT GTATTATTTC CTGGCTTGCT CTTAGCTTTC TTAGCCTTTA 27240

TCGTCATTGT GGAAGTTGTG TACTTGATTG CTTACTTTTT CAAGCAAAAA ATGCCTGTCC 27300

TCTTTCTTTC ACTCATTGGG ATTGTTGGCT TATTGTTTGG TATCCAAACC ATTCAGCCTC 27360

TTCAAAGGAT TGCACATCTG ATTCCCTTTA CTTACTTGCG TTCAGTGGAG ATTTTATCTG 27420

GAAGATTACC TAAGCAGATT GATAATGTCG ATCTAAATTG GAGCATGGGA ATGGTCTTAC 27480

TTCCTTGCCT GATTATCTTT TTGCTATTGG GAATTCTATT TATTGAAAGA TGGGGAAGTT 27540

CACAGAAAAA AGAATTTTTT AATAGATTCT AGCTTTCCTA TAGGTAGGGA AAATAAGTAA 27600

AAACTAACAT AGAGAGGGAA TCAACTTGAT TCTCTCTTTT TGATTCGAAA ACCAAACCAA 27660

AATACAAACA CAAACTTTTC AAAAAATAAC TTTTTATCTT GACAAGAGCT AGAAAACTTG 27720

GTATCATATA AAAGTTGAGA AAAGCAGAAG TGAGAGCTTC TCGCCTTGTG ACATTAAGTT 27780

GCCTGGCCCT ACGGATGAAA AGTTTCGAAG AAACGCTATC ATAACGTGCG GGCTTGTATA 27840

TTTACAAGTC CGCTATTGTT TTTCTCTAAT AAAACAAAAG AGGTGAAAAC CATAGCAAAG 27900

CAAGACTTAT TCATCAATGA TGAGATTCGT GTACGTGAAG TTCGCTTGAT TGGTCTTGAA 27960

GGAGAACAGC TAGGTATCAA GCCACTCAGT GAAGCGCAAG CTTTGGCTGA TAACGCTAAT 28020

GTTGACCTAG TATTGATTCA ACCCCAAGCC AAACCGCCTG TTGCAAAAAT TATGGACTAC 28080

GGTAAGTTCA AATTTGAGTA CCAGAAGAAG CAAAAAGAAC AACGTAAAAA ACAAAGCGTT 28140

GTTACTGTGA AAGAAGTTCG TCTAAGTCCG G 28171

(2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7147 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

CCGCTCAACT TTTGCAATCA AGGCTAAGTA GACAGCAGCA AATTTCATAT TGTATAATTT 60

CTGACTCATA CTTCTCTCTT TCTATGTGTA CTAGTATAAA TAAGAAAAAG AAGGCCGTCA 120

AGCCTTCTTT TGATTTATTC TTCTGCTTCA TCTTCTGTAA ATTGACTATT GTACAAGTCA 180

GCGTAGAAGC CACCTTGCGC CATCAGTTCC TCATAGTTGC CTTGCTCGAT GATATTTCCA 240

TCTTTCATGA CCAAGATCAA GTCTGCATTT CGGATGGTTG ACAAGCGGTG GGCAATGACA 300

AAGGATGTGC GTCCTTCCAT CAAACGGTCC ATGGCTTTTT GGATCAATTC CTCTGTCCGT 360

GTGTCAACAG AAGAAGTCGC CTCATCCAAA ATCAAAAGCG GTGCATCCTT AAGAAGGGCA 420

CGAGCAATAG TCAATAGTTG TTTTTGTCTT ACAGACAAGG TCACGGTGTC ATCCAAGATG 480

GTATCATAGC CATCTGGCAA GGTCATAATA AAGTGGTGAA TTCCCACAGC CTTACTAGCT 540

TCCATCATTC GTTCATCACT AATCCCTATT TGATTATAGA TGAGATTGTC TCGAATAGTT 600

CCTTCAAAGA GCCAGGTATC CTGCAAGACC ATTGAAAAGG CATCATGCAC TTCTGAACGC 660

GTCATAGCCT TGGTATCCAC ACCATCAATG CGAATACTTC CCTTATCAAT CTCATAGAAT 720

TTCATCAAAA GATTGACAAT GGTTGTCTTA CCAGCCCCAG TCGGCCCAAC AATGGCAACC 780

TTTTGACCAG CATGAGCTGT CGCAGAGAAG TCATAGTCTT GAACATTGAC ACCGTCCACC 840

AGAATTTCTC CTGCTGACAC GTCGTAGAAA CGTGGAATCA GATTGACCAG AGTTGATTTA 900

CCAGAACCTG TTGACCCAAT AAAGGCCACT GTTTGACCAG TTTCTGCTTT AAAGCTAACA 960

TGTTCAATAA CTGCCTCCGA ATTTGCCGCA TAGCGgAAGG TCACATCCTT AAACTCGACC 1020

TGACCTTTGA AGTTTTCATC AGTCAGCTGC ACTTGAACAG GGTTTTGGAT AGAAGAATGC 1080

AAATCTAAAA CTTGATTAAT CCGCTTAGCA GAGACCATAG TTCGGGGAAG AACGATGAAG 1140

AGTGCTCCCA TGAGAAGGAA GCCCATGACA ACCTACATGG CATAAGACAT GAAAACAATC 1200

ATGTCACTAA AGAGAGGCAG ACGCGCTATC GGAGCAGCGT CGTTAATCAC ATAGGCCCCA 1260

ATCCAGTAAA TCGCCACACT CAAACCACTT GAAATCCCCA TCATGATAGG ATTCAAAATA 1320

GCCATAAGAC GGTTGACAAA CAAATTCAAA CGGGTCAATT CATCATTTAC TGCTGCAAAT 1380

TTTTCATTTT GATAATCCTC TGCATTGTAG GCACGAACGA CACGAATACC TGTTAAACTC 1440

TCACGAGTGA TACTGTTCAG TTTATCTGTC AGCCCCTGAA TCAAGGACTG TTTTGGAAAG 1500

GCTAGCGTCA TCAAAACGGT CGTCATCAGG ACGTTGATAA TCACTGCCAC AAGTACGGCC 1560

CAGAGCCAGT ATTCTGAATG ACCTAAAATC TTCCCAATAG CCCAGATAGC CATAATTGAA 1620

CCACGCGTTA CCACTTGCAA GCCCATAGTA ATCAACATTT GAACTTGAGT AATGTCATTG 1680

GTAGTACGCG TCAAGAGGCT AGGAATTGAA AATTTCTTAA TCTCTGTCTG CGAGTAATCC 1740

AAAACTCGGT TAAAAATATC ACTTCTCAGC CTACTAGTAT AAGAAGCCGC CACTCGGGAT 1800

GCAAAAAATC CAACTGCAAC TACGGACAAG AAGGCAAGAA AGGACATTCC CATCATCATG 1860

CTTGCCGACT GCCACAACTC ATCTAAATTA GTTTCTTGAC TACCTAGCAA ATCCGTAATT 1920

TTCGAGATAT AGGTCGGCAC TTCCAACTCT AGATAGACCG AAAAGCAAGT AAAGAGAATG 1980

GCTAGTAAAA TCATCCCCCA TTCTTTTCTA CTAATTCTTT TGGCTAATTT CTTTATTCTC 2040

TCCTCCTATT CCCTTGATAT TTTGCCTGTA GTTGACCGAG AACCTTCTCA AAAATCAGTA 2100

ATTCATCTTC ATCAATGTCT TCCATCAACT GCTTGTCTAT GCGTTCAAAA AAAGCCTTAA 2160

CCTGTTGCAT CTGAGAACGT GCTTTGTCCG TCAGACGAAC AAACTTAGCC CGCTTATCAA 2220

CAGGACTCGC CTCCAATTCC ACCAAACCAT TTTGCACTAT ACGCTTAACC AGATTACTAG 2280

CAACAGGCTT GGTAATATTG AGTTCCTGCT CGATATCTTT AATCAAGACC AAGTCTTGGT 2340

TTTTCTCGCG ATTATCCAAA AAACGCACAA CCTGACCTTG CGGCCCACCC ATAAATTCAA 2400

TGCCGCAACG TTTGGCTTCC TTTTGCACCA TCAGGTGAAT TTGATGACCA AAACGCTTAA 2460

AGACTAACAT CGGTTTATCC ATAATCTCCC CCTTCTAAAT AAAAATAGTT CTCTGGAGAA 2520

TAATTAAATT TCTATGAGAA CTATTTTCTT GATTAAAAAA ATCCCAAGTG ATTTTCTCAC 2580

TTAGGATCAT GTTCTATAGG TTAAATTAAA ACCCATCTAC GTTCGTATAA ATCTTTTGGA 2640

CGTCTTCGTC GTCTTCAAGA ACGCTGTAAA GTTTTTCAAA GGTTTCAAGG TCTTCGCCTG 2700

ACAATTCCAC TTCTGACTGA GGAATCATTT CCAATTCAGT CACTTGGAAT TCTTCAATAC 2760

CAGACTCACG GAGGGCAACG ATAGCCTTGT GAAGGTCAGT TGGCGCTGTG TAAACTGTGA 2820

TTGTACCTTC TTGTGCTTCT ACGTCATCCA CATCCACATC CGCTTCGAGC AATTGCTCAA 2880

AGACTGCGTC CGCATCTTCA CCTCCAAATA CAATAACACC TTTGTTGTCA AAGAGGTAAG 2940

AAACAGAACC TGAAGCGCCC ATGTTTCCGC CGTTTTTACC AAAGGCTGCA CGGACATTGG 3000

CTGCTGTACG GTTGACGTTA GAAGTCAAAG TATCCACAAT TAGCATAGAG CCATTTGGCC 3060

CAAAACCTTC GTAACGTCCT TCTGTAAAGG TTTCGTCTGT GTTTCCTTTG GCTTTATCAA 3120

TCGCTTTATC GATAATGTGT TTTGGCACTT GGGCTTGTTT AGCACGGTCG ATAACGAATT 3180

TCAAAGCTGA GTTTGATTCT GGATCTGGAT CACCTTTTTT AGCTGCTACA TAGATTTCTA 3240

CACCAAATTT TGCATATACT TTAGAGTTAG CTCCATCTTT AGCCGTTTTC TTGGCTACGA 3300

TATTGGCCCA TTTACGTCCC ATTAGGAATC TCCTTTTTTC ACATTTTAAT CTTTCTTATT 3360

ATAACACAAG TTTTTTTGAT TTTCACTAGA GGAAATGGAT TTTATTAGCA AATCAAGCTA 3420

GGATAGCACT TTACCTGCTA AGATGGTCTT GCCTTTCTAT CTTTATCAAC AGGCACTCAT 3480

CCACATTCAA AAAACAAACT AGACCATTAT CTGCAAATAG AAAGTTTCAG CCAAGTTTGA 3540

CAAAGTCAGC TCAAATTACT GTTTGAAGTT TGTAGATATA AGCGACAAAA ACAATCATAC 3600

TGCACCTTTT GTTGACAGTC TACTCCAGAC ATATCATAGT TCAAGTAAAT ACTTTGAAAT 3660

TCAACAGTTC TTATAGGCGC TATTGTATTC TAAGAAATCA ATAGAAGAGT TTCTAAGCAA 3720

ACCTCTAATA CTCAATAAAA ATCAAAGAGC AAACTAGAAA GCTAGCCTCA GGTTGCTCAA 3780

AACACTGTTT TGAGGTTGCG GATGGGGCTG ACATGGTTTG AAGAGATTTT CGAAGAGTAT 3840

AATTTACGTG TTCCCAAGAT GGAGAAGTTA GACTAGTACA CTGGCACTTC TAAAACATTG 3900

CTAGCAATTG ATTTGTTCAT ATTTAATTTC ATTTTTTCCA TAAATGGGTA TTAGATATAA 3960

ACAGCAAAAT ATTTCCGATA CGTGTCGTTC TTGAATTTCC AATCATCTAA AACAAGTAAA 4020

GGATAATCAA TCCCCTGTAT ATCAAGGAAT TGGCTACCCT TTTTACTTTT TTACACATTC 4080

TGTTTGATAG ATTCATTTTA ACATCACGAG CATACTCCAA TGGAAATCGC TAGGCAAGAG 4140

ATAAACTTTC AGATATCCGC AGAGAGATCA TCGCCTCTTT TTGTCGCAAG CATTCTCCTC 4200

TCCTAGTCAT TTTCTACCTT ATCTTCTACC TGAGGATAGA GAGTTGTTCC CCAAATAGAA 4260

ATCGTCCGCT TACGCACTAG TGGCAAATCG GTTTTTTCAT AAACCGTACG CCACCATTCC 4320

CAGGCAAGCC CGGTACACTC TCTAATTTTG ACAGAGAGAT TACGAACATT CCCTTTTAAA 4380

GGAATACTAG TGGTAAAGTG AGCCGTTAAA TCCTGCCCAT TTCTGTCCCA AGCCTTAGGA 4440

GTCAAGACTT CCTTACCTTG ATGATCATAG GATAATTCAT TCCAAGTAAT ATAATATTGG 4500

GCAACATAGG CACCACTATG ATCCAGCAGT AAATCTCCGT TTCTGTAAGC TGTAACCTTA 4560

GTCTCAACAT AGTCTGTACT ATTTTGAAAG GTCGCAACTA CATTGTCACG TAAAAAAGAA 4620

GTTGTATAGG AAATCGGCAA GCCTGGATGA TCTGCTGTAA AGCGACTGCC TTCTTGAATC 4680

AAGTCCTCTA CCATATCCAC CTTGCCTGTT ACAACTCGGG CACCCGAACT TGGGTCGCCC 4740

CCTAAAATAA CCGCCTTCAC TTCTGTATTG TCCAAAATCT GTTTCCACTC TGTCTGAGGA 4800

GCTACCTTGA CTCCTTTTAT CAAAGCTTCA AAAGCAGCCT CTACTTCATC ACTCTTACTC 4860

GTGGTTTCCA ACTTGAGATA GACTTGGCGC CCATAAGCAA CACTCGAAAT ATAGACCAAA 4920

GGACGCTCTG CAGAAATTCC TCTCTGTTTT AAATCCTCTA CCGTTACAGT ATCTTGAAAC 4980

ACATCTCCTG GATTTTTAAC AGCATCTACG CTGACTGTAT AATAAATCTG CTTAAAATTA 5040

ACAATCTGAA TCTGCTTTTC GCCTGAATGG ACAGAGTTAA AATCAATATC AAGAGAATTC 5100

CCTGTCTTTT CAAAGTCAGA ACCAAACTTG ACCTTGAGTT GTTCCATGCT GTGAGCCGTG 5160

ATTTTTTCAT ACTGCATTCT AGCTGGGACA TTATTGACCT GACCATAATC TTGATGCCAC 5220

TTAGCCAACA AATCGTTTAC CGCTCCGCGA ACACTTGAAT TGCTGGGGTC TTCCACTTGG 5280

AGAAAGCTAT CGCTACTTGC CAAACCAGGC AAATCAATAC TATAAGTCAT CGGAGCACGA 5340

TCGACCGCAA GAAGAGTGGG ATTATTCTCT AACAAGGTCT CATCCACTAC GAGAAGTGCT 5400

CCAGGATAGA GGCGACTGTC GTTGGTAGCT GTTACAGAAA TATCACTTGT ATTTGTCGAC 5460

AAGCTCCGCT TCTTTCTTTC GATAACAACA AACTCATCGG GTAGCTGATT ACCCTCTTTG 5520

ATGAAACGAT TTTCAATACT TTCTCCCTGA TGGGTCAAGA GTTTCTTTTT ATCGTAATTC 5580

ATAGCTAGTA TAAAGTCATT TACTGCTTTA TTTGCCATCT TCTACCTCCT AATAAGTTCC 5640

TGGATTGAGT TGCATAAACT CAGACTTGTT CAGCGAAATC AGCCGTGGTT GGACTAAGTA 5700

ATCCAAAATT TCCTCGTACA ATTCTTCTGA GACATTGCGT CGCCGTCTGG CTAAATAAGA 5760

AGTCGGAATG ACCGTATTAT CCAACATAAA TACCTTATCT AAGTCAATCA AGGTTGGTCT 5820

TGTAAAAGGA TTACGAGCTA GATCCGGCTC TTCTATCATA AAGTTCTTGA CCAAACGTCT 5880

GGTCAAGAGA GCTGGTTTGA AGGTCTGATT TTTAACCAAC TCTTTGTTTT TAGTCATGCT 5940

GTTGTCAATA CAGATATACA TATGATTCTT CACAGCCAAA TCGCTACTAA TAGTCGGAAA 6000

AGGCAAATAA AGAGCTACAA CATCTCCTCT CTTAATCAAG CAAGAGCACC CCCTTTTCTC 6060

CTAATGTAAC ATAGACAGGA TTGACCAAGT CTTCTGATTG ACTCAGAATT TCCAAAGTTT 6120

GAGTTTGGCG CGCTGTCAAT TTAGTAGCAT CTTGTCTCTT CAATACAAAA TGCTTGTCGC 6180

CAATAACCTT GACAATATAA TCCTTCTCCA AAGCTGACTG GTAAATCCAC ATCAGATGTT 6240

GTCTGTCCTG AGAACTCAAG AGAGAAGGAT TTTCAAGCCT CCCGATAGTC TGATAAAAAT 6300

CAAAAACAGG AGCTAACTCC TGCCAATCTG ATTGGCTAGT TGTCAAGGCT AGAAAAAGGG 6360

CTTTGCGAGC TGATACTTCT TGGTTAGCCT TGAGAGTTAC TTTCCCCTCC AAGTTTTTTA 6420

GAAATCGGGA AACTCCAGAA AGCAAATTTT TCTCTAACTG CGAGAAATAA AAACCTTTCG 6480

TTCCCAGACA TAAGTCTTTC ATGTCGCTTT CTCTAGCAAA TAAGAGCTCA AACATTTGAT 6540

AGTAAAAGAA AAATATCTGG CACTGGGTCG CGCTCATCTT TTCCTTATCG GCTTCTTTTT 6600

TTAACCAGAG CAAGGGCGAC AGGTAGCTGG ATTGAGACAT TTCCTCTACC TCCTACTCTT 6660

TTTTAACTGG AGCATCTGCA CTAGCTGCCA CTTCTTTTGA CTGGATACTT TCCCACTGGT 6720

TAATCTCCTC TGAGATAAGA CCTTCGCATG TCTTGACAAA TAGGGCAAAA GCCTTGGTCT 6780

TTCCTGCATA TTTCTCCGTT TGGCATTGAT AGAGGAATTT TTCTTTCTCC AGGAGTTGCG 6840

CAGTTTTTTG GTAAGAAATC CAATTTTCCT TTGCATTATA CAAATTGATA ATCCCCTCAC 6900

ACAGCAAGCC GAGACTGGAT AAGGCAACCG AAATCAAACG GTAGCGATCA CCTGGCATAG 6960

GAATAGCACA AAAGACAGCT ATGAGGAAAC CTGCCACGAT TTCTGTTATT TTTAATACCT 7020

TATAGCGCCT ACGATGTTGA ACGCTTTTCT TTAAAAAATG AGCTATCTGT ACGTCTAATC 7080

GCTCTGTCAG GTACATTTCT TCTGGCGTCA TATTCGTAAC TCCTTTCATT TACTTTGATA 7140

ATCAGGG 7147

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 755 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

CCGCATGGGA TTGGTGTCCT TTTGGGCAAT CTCTTTGACC AAACTGGAAA CATGTTTTAT 60

GCGCCTGCCT TTACTGCCCT TGTCGGCGGT ACGTCTATAT GATCCTAGTC GCAAAAGTTC 120

CGCGCTTTGG AGCCATTACC ACTATCGGCC TTGTCATTGC CCTCTTTTTC TTGGGAACTA 180

AACACGGTGC TGGTTCCTTC CTTCCTGGAA TTATCTGTGG CCTCCTAGCA GATGGAGTAG 240

CTCATTTAGG AAAATACAAG GACAAAACAA AGAACTTCCT TTCTTTCATT ATTTTCGCCT 300

TTAGTACAAC AGGACCAATC TTGCTTATGT GGATTGCGCC CAAAGCCTAT ATGGCTACTC 360

TTCTGGCAAG AGGAAAATCC CAAGAATATA TCGACCGTAT CATGGTCGCT CCAAACCCTG 420

GAACTGTCCT TCTATTTATC GCAAGTATTG TCATCGGAGC CCTAGTGGGT GCCTTGATTG 480

GACAAGCCTT GAGTAAAAAA TTTGCCCAGA AAATCTGATC AGTTAAAAAG AGCCACGCGG 540

CTCTTTTTTA TTTATGGCTC AATTTCTTAG TCAAGAAATC TCCCAAGAAT TGGATTGCAA 600

AGATAATCAA AATGATAATA ATGGTTGCCA AGATGGTCAC ATCGTGATTG TAGCGGTTAA 660

ATCCATAAGC GATGGCTACG TTACCGATAC CACCAGCTCC AACCGCACCG GCCATAGCTG 720

TTtcCCAACA AGGGaAtCAA GGTcACAGTC GTCAC 755

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3010 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

TTCAATTGGT ATCTCAATCA ACGGTCTTCA CATGGTTTCA ACTGGTTTGA CTCTTGAAAA 60

AGCGAAAGCT GCTGGTTACA ACGCAACTGA AACAGGCTTT AACGATCTTC AAAAACCAGA 120

ATTCATGAAA CATGACAACC ATGAAGTAGC AATTAAGATT GTCTTTGACA AAGATAGCCG 180

TGAAATTCTT GGTGCCCAAA TGGTTTCACA TGATATTGCA ATTAGCATGG GAATCCACAT 240

GTTCTCACTT GCTATCCAAG AGCATGTGAC AATTGATAAA TTGGCATTGA CAGACCTCTT 300

CTTCTTGCCA CACTTCAACA AACCATACAA CTACATCACA ATGGCTGCCC TTACGGCTGA 360

AAATTAAAAA TGAATGAGCT ATCTGGCCTT AAGTTAAGGT CAGATAGTTT TTAGCTAATT 420

TGTCCCCATA CAATTATAGT TTTTTTATCT TGTGCTTCAT TCTGTTCTGA CTTAAAATGA 480

AAAGGTAGCT ACCAATACAA ATGATGAGGA TAAAACAAAT GACTGAAAAT CGTTATGAAC 540

TAAATAAAAA CTTGGCACAG ATGCTCAAGG GTGGTGTTAT TATGGATGTG CAGAATCCTG 600

AACAGGCTCG TATCGCAGAA GCTGCTGGTG CGGCAGCTGT GATGGCCTTG GAACGAATTC 660

CGGCTGATAT TCGTGCAGCT GGAGGAGTTT CCCGCATGAG CGACCCAAAG ATGATTAAGG 720

AAATCCAAGA AGCGGTTAGT ATTCCAGTAA TGGCTAAGGT CAGAATCGGG CATTTTGTTG 780

AAGCTCAGAT TTTAGAGGCT ATTGAAATTG ATTATATCGA CGAGAGTGAA GTTCTATCTC 840

CAGCTGATGA CCGTTTCCAT GTGGACAAGA AAGAATTCCA AGTTCCTTTT GTCTGTGGTG 900

CTAAGGATTT GGGTGAAGCC TTGCGTCGTA TCGCTGAAGG TGCTTCCATG ATTCGTACCA 960

AAGGAGAACC AGGGACAGGG GATATCGTCC AAGCTGTTCG TCATATGCGT ATGATGAATC 1020

AGGAAATTCG CCGCATTCAA AACTTACGTG AGGACGAGCT TTATGTTGCT GCCAAGGATT 1080

TGCAAGTCCC TGTAGAATTG GTCCAATATG TTCATGAACA TGGAAAATTG CCAGTTGTAA 1140

ATTTCGCTGC TGGAGGTGTT GCAACGCCAG CAGATGCTGC GTTAATGATG CAATTAGGGG 1200

CAGAGGGGGT CTTTGTCGGT TCAGGTATTT TCAAGTCAGG AGATCCTGTT AAACGAGCGA 1260

GTGCCATTGT TAAGGCTGTG ACTAACTTCC GTAATCCTCA AATCCTAGCT CAAATCTCTG 1320

AAGATTTAGG AGAAGCCATG GTTGGTATTA ATGAAAATGA AATCCAAATT CTCATGGCTG 1380

AACGAGGAAA ATAGATGAAA ATCGGAATAT TGGCCTTGCA AGGGGCCTTT GCAGAACATG 1440

CAAAAGTGCT AGATCAATTA GGTGTCGAGA GTGTAGAACT CAGAAATCTA GATGATTTTC 1500

AGCAAGATCA GAGTGACTTG TCGGGTTTGA TTTTGCCTGG TGGTGAGTCT ACAACCATGG 1560

GCAAGCTCTT ACGTGACCAG AACATGCTAC TTCCCATCCG AGAAGCCATT CTATCTGGCT 1620

TACCAGTGTT TGGGACCTGT GCGGGCTTAA TTTTGCTGGC TAAGGAAATC ACTTCTCAGA 1680

AAGAGAGTCA TCTAGGAACT ATGGATATGG TGGTCGAGCG TAATGCTTAT GGGCGCCAAT 1740

TAGGAAGTTT CTACACGGAA GCAGAATGTA AGGGAGTTGG CAAGATTCCA ATGACCTTTA 1800

TCCGTGGTCC GATTATCAGT AGTGTTGGTG AGGGTGTAGA AATTTTAGCA ACAGTGAACA 1860

ATCAAATTGT TGCAGCCCAA GAAAAAAATA TGTTGGTAAG TTCTTTTCAT CCAGAATTGA 1920

CTGATGATGT GCGCTTGCAC CAGTACTTTA TCAATATGTG TAAAGAAAAA AGTTGAGATT 1980

GAATTTCTCA ACTTTTTTAC ATGTAATAAA CAATAGCGAT GTATTGAAGT GCGGACGCAG 2040

CTAGGATAAA GAGATGCCAA ATCATGTGGA AATAAGGTTT TTTCTTGGCA TAAAATCCAG 2100

CTCCAACTGT ATAACAGAGT CCGCCAGTTA CCATGAGACT CCAGAAAACG GGTGTCGTTT 2160

GACTGATAAT GGCAGGAATG ATAGCCAGAA CCAACCAGCC CATAATCAGG TAAAGAGCAA 2220

GGCTAAATTT CTCATTGACC TTTTTAGCAA AGATTTTATA GAGAATACCA AAGATGGTCG 2280

TTCCCCATTG GATGACAATA ATCAGATAGC CAAACCAGTT ATTCATCAAG GTCAAGACAA 2340

CGGGCGTGTA TGAGCCGGCA ATGGCAACGT AAATCATAGA ATGGTCAATG ATTCGCAAAA 2400

CATATTTGTG GGTCGAACCA TAGGCCATAG AGTGATAAAT GGTGGATGAT AGGAACATGA 2460

GAAAGAGACT GATGACGAAA ATGGAAACGC CGATAGAGGA TAAAAATCCG TGTGCTTCAT 2520

AACTATAGAT GGATGAAATA GGCAGCAAGA TAAGCATGAT GACTGCACCC ACAGCATGGG 2580

TCACGCTATT AGCAATCTCC TCTCCAAAAC TGAGTTGTTT GCTGAGTTTA AGACTAGTGT 2640

TCATTGGATT ACCTCCTCTT GAGTATGATC GATTAAGTCT AGAGTTTGAT GATAGAGTTT 2700

AACGGTTTGG CAGCTGGTTT GGATAATAGG GTTAGCTGGG TCAATTCCTT GGTTCATGTA 2760

GTCCACAAAA GCATCGTAGA GTTGGTCTGA ACTTGCTTGA GTTTGTAGAG TATTAAGTGT 2820

CTGGGCTATT TCTTGAATAG AAAATACAGA CTTGAGGGTT GTGATAGCAA TCAAACGGGC 2880

AATCTGTTGG CGTTGGTATT TTTTTTTGTC AGGCTTTGTC AGGTAACCAT TTTTCACATA 2940

ATTGTTGACC ATAGATGCTG TTAGGCCCTT GTCTTTATTA GGAGAGATAG GGGCGCAGAC 3000

CTGATTGACA 3010

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15213 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

CATAAATCGG TGCAAATAAC TTAATAGTGA AGTAGCCATT TCTTTCGTAT TTACCTGAGG 60

CATATTCCCT AGACGAAAGA ATATTATTAT CAATCAAATC ATTGAATGAA CGTAGTCTTT 120

CAACTTCTTC TACTGTTAGA TTTCTGACAA CATTTGTTGC ATAGACCTTA TTTCCATCAG 180

GATCAGGATG GTACTCATTT GTAACTTTTC TAAGAAGTTG TTGTTTTTGA TTCGTATCCA 240

ATTTAAGAAT TGAATTTCCT TCGAGATATT CCAACATATA AACAACGTCA AACATGTTGT 300

GGACATATTG CTTCAAATCA TCTGCATTAT TAAATCTTGT AGTTGGATCA AGTACTTGTA 360

ATCGTCGACT TTCTGTACTA TCAGATTTTG AATGTTTCAA GATGGAGTTG ATGGTAATGG 420

TCGCATCATC TGGATGGTCT GGTGCTTGTA ATAATCCTTT AGCAAAGAAC TCTGGTCCCA 480

AGCCACTTCT TCGACCATAT CCTCCAAGAT AAATGTCCTG ATCTGAGTCA TGTGTCATCT 540

CATGCGTATA AGTAATAGCT CCATCCTTAT CCAACATTCG ATAACCCATA TAATAAACTG 600

CATCACCTGT AGCATAAGCA CCGTGTTGAT TATGCCCAAC TTTATTTCCA ACAGGTCCAA 660

AGAAATGTTG CATTGCAGGA TTTGGATTAT CAAAATCTGC CACTTCTGTA GCTTTCCCTA 720

CGGTATTATC ATCGCCAAAT TTATAAGCAT CGTAAAGCAA AATATTTCTA TAAAGTTTTT 780

CACGTGCATT GTCGTCTAAA ATACGATACC AATAATCGTA GTGATCTCGC TGACGTTTGG 840

CTGTTTCACG CGCATTTTCT TCAACAAAAT CATTGAGAGC CTTGCCCGCT TTATGGTCAC 900

TACTGCGGTA GCGATCATAA GCTCCAAATC CTAGACTAGA CATGGTCGAG ATGACAAATA 960

CGGATCTCTC TGGCAAGGTC AGGAGAGGCA AGACCATATT GCGGTATTTC CATGTGGCAC 1020

TCGTGATACG ATCATAAACA CCGATAGAAT ACTTGGTGCC AGCTAACCCT TGCTTCGTTT 1080

TCACCTCTTC GATAGTGGAT TTTTCTTCGA CAATGTAAGC CTTAGTCTCT GATTTAAACC 1140

AGTCATTATT GCTTGTATTT GGTAAAAAGA CTTTTCGGTA ATGTTCCAGC GTGCTAAACA 1200

AATCTGTCGT TCCATGTTGA CTGGCAAGAC TGATACCATA AGTATCGACA TTATTCTTAG 1260

CTAGAAGATT GTTAAAGCCA GATTTACCCA ACTCAATCAG AGTATCTAAT GGTGAAGCAT 1320

TCCCCTTACC AAAGAAGTCC AAATGGTACA GAACTAGGTC TTTGACATTC ACCTGACCAT 1380

AGCTAAAGTT ATACCACCGT TCCAGATAGG TCAAGCCAAG TAGCAAGGCT TCCTTGTTGC 1440

GTTTGATTTT ATCTACAAGA TAACCTTCAG TGACGGGGTT AGCACTAGCC AGTCCAGCAT 1500

CCGCTGACAA GAGTTTTTTC AAACTGTCTT CCAGTTGTTG TTTTGTTTTG GCGAACTGGT 1560

CTTCTAGATA GAGCTCAGTT TGCTTGACGT TTGGAGAAAT ACCCAGCGTC TTTCTGATGG 1620

CTTCTGAATG ATAGTCAACC TTTTGTAAGT CAGGTAAGAC TTGCTTGATG ATAGAGGTTT 1680

GGTCATACAG GAATTGGTTT GGCGTATAGA GAAGTCCAGT ATTGCCCAGA CTATATTCTG 1740

CTAATTTGGC GAAATCATTC TGGTATTTGA GATCCAGCTT CTCAGATAAA TCATCCTTGT 1800

AGTGAAGCAA GAGTTTGTTT GCAGTCTGTT TGTTAGAAAC AATGTCTGTG ATGACTTGGT 1860

TGTCCTTCAT CATGACTGCT GACAAGAGTT CTTTTTGATA TAAAAGACTG TTCTCATTGA 1920

CCAGGTTTCC GTATTTGACG ATGGTTGCCT TGTTGTAGAA AGGTAGCAAT TTTTCAATGT 1980

TTTTATAAGT CAAGTTGCGC TTAGCTTGAT AATAGGCCAC CTTAGAAAAA TCACTGTCTT 2040

TTTTGCCACT TGTTGAAAGT GGCTCCACTG TTGGTAAAAT GAGAGGATTG ATTTCTGCTT 2100

TTTTGCTTGC AATTTGAGAA GCATCTAGCA TTGTTCCTCT TTCTTCAAAG GATTCCTTGC 2160

TGACGACCTC ATCCTTGACC AAGGTGACAT TGTAGACTCT GTTGGCCTTG CTGCTGAATG 2220

TGTCCTTTAC CTTCATTTCG TTATAGTGGT AACCAGTGAT GGCATTTCCG TTGGTTACAT 2280

TAACATCGCT GAGAACATTG GTCAAACTTC CAGCATGCCT AACATCACCA GAAGTTCGAT 2340

CCCACAAATT GCCTGCCACT CCAGCGACTC TACCAAAGTG CTTGACATTG TTGATATCAC 2400

CTTCAGCATA GCTATCTTGG ATCTGTGCAT CTCGGTCTAC TAGGCCTGCA AGTCCACCCA 2460

CAGTCTGATC TGAAGTATTT GTGTTAGATG AAATGGCTAC TGTCGCTTTT GACTTAGTAA 2520

GTAAAGCCTT GTCACCTGTC AAATGACCGA CCATACCACC GATATTGTAG GCAGCAGTCG 2580

TTTCATAAGT GTTGATAATT CTTCCCTTGA AACTGCTCTC TGTGATGCTT GATTGCTCAG 2640

CCTTAGCCAG CAAACCACCG ATACCACGTT CACCAGCCAG AACACCATCG ACGTGAACTT 2700

GCTTAATTTT TGTGTTATTC TGAGCTTCAT TTGCCAGTGA ACCGATATCA TCTTTCCCTG 2760

AAATAGCAAC ATTTTTTAGA CTCAGTTTTT CTACTGTAGC ACCACTCAAG TTTTCAAACA 2820

GAGGTTTTTT CAAATTATAG ATAGCATAAT TCTTGCCATC TTTTTCACCG ATTAAACGAC 2880

CAGTAAAGGT GTCCTTGATA TAGGATCTTT CATCAGGACC AAGCTCCACT TCGTTAGCAT 2940

TCAGGCTGGC CGCTAAATGA TAGGTTCCAG AGGGATTTTG GTTTATAGCT TTGACCAGAT 3000

TACTAAAGGA AGTAAAGTTT GTTGTTTCTT CTGTTCCCTT CTTAGCTAGA TAGAAGGTAA 3060

AATTATCTTT ATATCTGCTT TCTATCTCCT GCTGAAGCTT CTCTACTTTT GCTGTGATTT 3120

TATAAAGGAT TTTATCATTT TTTCTTTCCT CTGATATTGA TGCTACTGGT AGGTATACAT 3180

CTTTGAATGA AGAAGATTTC ACTTTAACAA AGTAGCTATT TGGATTGCTT GGAACTTGCT 3240

CTAACGAAAT GTGTTGTTTA TAAGTACCAT TTGACAAACT GTATAACTCT AGGTCGGAAA 3300

CATTTCTTAA TTCAAGTGTT TTCTCTGGTT CTTCTACCTT TTTATCAGGG TCTAGTTCAT 3360

TTTCTTGTTT AATTTCTTCG TTTCCATTTG AATTGGATGT GTTTGATTCG GTTGAAACAT 3420

CCTCAGTTGA ATTTCCGTTT GATGGTTCTG GTTCTGTTTG TCCATTCTCT GATGTTGTAT 3480

TACCTGAATT TTCTGGTTTT GTTGCAGTTC CGTTTTTTTC TGGTTGATTT GATTCTTCAA 3540

CTGGTGGTTT TGAATCACTA GGTTTATTGG ATACTTCTCC AGTATTTTCG TTAGCTATTT 3600

TCCCAGAGTT TGTTTGTGTT TCTTCTGCAG GTTGAACTGG TTTTTCTGTT TCTTGATTTG 3660

AGGTACCTTC TACTGTGCCT TCATTTGGAT TTACTGGAAC TTCTTCTACA GTTTTTTCTG 3720

AATTTTCATT TTTAGAGTCA TTATGTTCTG GTTTATTTGA TTCTCCAACT GAGGTTGTCG 3780

AATCACTAGG ATTACTGGAC ACTTCCCCAG TATTTTTGCT AGATGTATCT GGTGATACTT 3840

TCTCTGAATT CGTTGTTGAT TCTTCTGCAG GTTGAACTGG ATTTTCTGCT TCTTGAATTG 3900

AGGTTCCTTC TGTAGTACCT TCATTTGGAT TTACTGGTGT TTCTTCTGTT GGTTTTACTG 3960

GAACTTCTTC AGTTTTTTCT GGACCTTGTT CTTTGGTCTT CTCAACCGGA GTTTCAGGTT 4020

TTACTTGCTC AATATTACCC TTATATTCTG GAAGCGGTGC TACCTGCTCT GGTTCACCTT 4080

TATCACTTAC CACAGTATCT GGCGACTCTG GTTGAACCTC AGTCTCACCT TTGTCGGTCA 4140

CAACTGCTTC GGGTAATGTA GGTTGAACTT CTGGTTCGCC TTTGTCACTT ACTACAGCTT 4200

CGGGCAACTC AGGCTGAATT GCGGGTTCAA CAATAGCTCC AGACTGTACG TCCTTATGTT 4260

CTACACCAGT CTCAGGTTGT TCCTTTATAA CTTGAGTTTT TTTAGTACCT TTTTCGACTA 4320

TTCTTGGACT AGGCGCAGTC GTTGAAGTTG AAACAATTTC TCGCGAAACT TCTTCCTTGT 4380

TTACAGAGAA TATTCTGACG ATTTCAACTT TCTTACCTAA TTTACCTTCT TGTTTTACTC 4440

TTACAGTTCC TTCAGCTAAA TCAGGATTTT CTTGAATTTC TTCTTGAAAA TCTATTTTTG 4500

TCTCCATAGT TTCCTCACGA TATAAGAGTT CAGGTTTGTT CAATTGACCT GATAAAACTT 4560

CATCCTGTGG ATTTAATGTA TTTACCCCAG TCTTTTCTTT TGGAGAAATC TTCTCCTCTT 4620

TCTTCGTTTC TAGATTCTTA TGTTCGGCTA ATTGTTCTTG AGAATCTGAA GATTGTTTCT 4680

CTTCTTTTCT TGGATTGATT AATTCAGTAG AGAAAGGTTT TTCAACTACT TGAACTTCTG 4740

TCGGCTTAGT TGAAGAAACA GGTGTTTGTT CCTGAATAGC TTGTACTGTT GATGGATGGT 4800

CTACAAAATT CGGTGTAACA TTATAATCCA CCTTTTGTTG TTTTGTAGGA GTGGCAACTG 4860

AACTCTTTTG ATTACTTACT TCAGACTCAG AAGTCGTTTT TCCCTCTTTG ATATATCCAA 4920

TATAAGTGTA ACCTGAAATC TCTTTAGGAA GAGGTAATTT TTCTCCAGAG GTCAATTCAT 4980

AGTCCGTATT GTAATTTAGC AAAAGATGAT TTTCTAAAGC ATGGACTGAA ACTAAGACAC 5040

CATTTCCTAT CCCTGCAACC AATACTAAAT GTAATACCGT TTTATTCTTA ACCTTTTTCT 5100

TGGAAACAGC AAAAATTAAA ATTCCCATAG CAGCTAAGCT AGCACCAGCA ACTAGGGCTT 5160

GCCTCTCATT CTTGCTTCCA GTATTTGGCA ATTCCGCCAG TTGATTTTGA GAATTTAACT 5220

TATAAACAAG ATAATAAGTT TCATCATCAT TCTCCACGTA TGTCGGAATA TCATAGACAA 5280

GCTGCTTCTT TTCTTCTGAT GATAGCTCTG AATCTGCCAC ATATTTATAG TGAACTCCCG 5340

CAGTTTCTTG AGCATCCACA GATGAACTAG CTAATACAGA CATAAAAAAT AAACTTGAAA 5400

TCGTTGCAGA TACAAGTCCT ACTGATAATT TTCTAAATGA AAAACGCTCT TGTTTTTCAC 5460

CAAAATACTT TTCCATTATT CCTCCTTGAA ATAAAATTTA TATATGTTAC AAAGACCTTT 5520

ATTATATTAG TGTATTATCT ATTATCTATA GAAAAGGCAG TATACCTTAA TTATACTCTT 5580

AATTTACAAA AAAGTCTTAA AATTGAGATG CGCTTTCATA CTTTGTTTTA TATTATTTGG 5640

AGGTACAATA ACACCTACCA TGAAATTTAC ACGGTAGGTG TTACTCATAT CACTAATCGT 5700

TCTAAAAATG GTTTGAGGCA GTTGAGGAGA ATTCCTTCTA TCCAGCTTCC TTGTGCTGAT 5760

GAGCGATGGT CTTCCTGCAG GCTTTTTTTT AGAAAATCTC GGACTTGTTC TGGTGCGATT 5820

TCAAATTCAA AGGCTTTCAT TTTATAGAAA AAGTCGATGA GATGATCTGA CAGGTATTCA 5880

GTTGAAAAGG GTACTTCACC ACTTTTTCTA TATTCTAATA AGAGTCTAGA AAATCGAGCT 5940

TTTTCTTCAG GAAGCTCACG AAAATAGGAA TTGAGGATCC AAGTCTGCTT CTGTTTTCTT 6000

TCAATTGGAT CCTGACTGGC AATTCGTTGG TCTTTTTCCA GCTCTTTTTG GTATTGTTTG 6060

GCCTTGATAG CTCGTTCTGC TCTATTTTTA CCAAAAAGAA TTTTTTCCCA CTTGCGTTCT 6120

TCTTGAGTCA GGGTCTCTGT AAAGCCAAAG TAATCTTGAT AAGCACGCTC TGCGGGTCCC 6180

ATGGCTAGAA CCAGATTGTC TGCATATTGC TTGGCGATTT TATCCCTCTT CTTGCGTTCT 6240

TTCTCTGCCT GGATACGGAG TTCTTGTTCG TAGTCAATTT TCTCCTTGCC TAGCTTGACA 6300

AGGTAGAGTT GGTCATCCGA TTTCCCAAGT AAAAAGGGTT TGATACACTT TTCAAGGACT 6360

TCTTCCATCC GAGCCTTTTT CTTTGGTTCC GCCTTGGTCC AACTTCCTCC CTGAAAGACT 6420

TCTAGGAAAA GCTGGTAGTC TCTCTCAGGC GCAAATTGAT TGCCACGATT GGGTTTGAAA 6480

ACACCTTTTT CCCAGAGCCA TTTTAGAAGT CGCTCGTCAA AGTTACTTTT ATTGACCTTG 6540

ATTTTTTCCT TTTTCTGAGC TTTTCTGGTT AGATTTTCAA CCTTTCTGAG CAGTTTTTCT 6600

TCCTCTTCCA ATTGCTGGTC AAGGGACAAT CGATGAAAAT GACGAACACA GTCGCTACCA 6660

ATTGGAAAGA GGCGTTGGCC TGTGACACCG TTAAAGAGTT CATAAGCGTA TTTGATGGCA 6720

TTTCCACAGA CACAATTGCT ACGGCCGATA CCGTTAAAAA TAAAGGAAAC TTCATTCCAT 6780

TCCTTGGTAG CTTGTTCCCA AGTATCCGCT TTCGAAGCCT GTAAAACTGC ATCGTGCAGG 6840

GATTTTCTAA CTGGAAGTGT CATGAGGTCT CCTTTCTAAT ACTCAATAAA AATCAAAGAG 6900

CAAACTAGAA AGCTAGCCGC AATCAGCTCA AAACACTGTT TTGAGGTTGT AGATAGAACT 6960

GACGAAGTCA GCtCAAAACA CTGTTTTGAG GTTGTGGATA GAACTGACGA AGTCAgTAAC 7020

CATATATACA GCAAGGCGAA GCTGACGTGG TTTGAAGAGA TTTTCAAAGA GTATAAGTTA 7080

TACTTTTACA ACTTGAACCT CGTCTTTACC GAGTAAAATC AAGTATTTTT CAATATTTTC 7140

AATCGAATAG GCTCGTGATA AAGCCTCTTC GTATAGAGCT AACTGACCAC GATAGCGGTC 7200

TACGAGTTGA CTTGGTTCAT CATAGCGGTC TGTCTTGTAG TCGAACAGAA CAATTTTGTT 7260

TTCGTAAAGC AGATAGCCAT CAAGGATACC ACGGACAACA AAGTCTTCCT GACTCTTTTG 7320

GTCTCGTTTG AGCATGGAGA AAGGTTGCTC GCGATAAAGA TGGTCGGTAT TAGCAAGAAT 7380

TTCCTGACCG AGTACTGTGT CAAAGAAAGC AAGAATTTTA TCAAGATTGA TCTTGTCTCT 7440

GACAGCTTGG CTAGTTTGAA CTTGTTTGAG TGTTTCTGTT AGGCTAGCAA GGGTTAGTTG 7500

CTGGCTGAGG TCAATTCTCT GCATGAGTTC GTGAGTAGCA CTACCAATCT CAGCTCCAGT 7560

TACCTTTTCT TTGGTTGAAA AATCTGGCAA ATCGAAGCTG ATTTTCTTGC CTACTGACTG 7620

ACCTTGACCA GCAATCTCGA CACCTTCCAT ATCCATAACT GGTTCGTAGA ATTTCTTGAT 7680

TTGACTTGGG GTTTGAACAC TAGGAAGTTC AATAGCTGCG CGGTGAAGAG TATTATAAAC 7740

TTCCACCTCC TTCAGCATTT CCAGAGCTTC TTTGATGGTA TCTGACTGAC GATTGTCTGC 7800

TTGGGAGCTA TCTTGGAGAG GACTCTTGGT TTCCAACTCT CCGATAGCTT CTCTGGTCAA 7860

CTGATCTTCG CCAATAAAAC GATAACTAAA GTTGAGCTTG TCCTTAGTAA ACACTTTACT 7920

GATAGCCCAA AGCCAATCTT GGAAATTCCG TGCTTGCAGT CTAGTATTGC TATTTAGTTT 7980

CCCATTTTTG GCTGCTGGGT ATTCCTTGGA TTCCAGCTTT TCACGAGAAC CCTTGCCGAC 8040

AAGATAGAGC TTTTTCTCAG CCCGCGTCAT AGCAACATAC AGCAAACGCA TCTGCTCAGA 8100

ATAGCTTGCT AGCTGTAATT CCTCTTCGTT CTGCCTATAG GTCAGACTAG GAATGGAGAG 8160

TTTGATGGTT TTAGGATAGT GGTCTTCTAC TGCCCCTGTC TCCATCTTGG CAATATATTT 8220

GACACCAAGA CCATTCTGAC GACTGAGAAT GACTTCTGAC ATAGAGTCTT GCTTGTTGAA 8280

ATCTTGATCC ATATTGAGGA TAAAGACGTA AGGAAACTCC AGCCCTTTAC TCTTGTGGAT 8340

GGTCATGAGC TCTACTGCAT CTTTTGGCGG TGCGACGGCC ACGCTTGCCA AATCGTGCTG 8400

GGCTTCTAAG ACTTGGTCAA TCATACGAAT AAAACGCGAC AAACCTTTGA AATTGCTCTT 8460

TTCAAATTGA TCAGCACGCA GTGCTAGGGC ATAGAGATTG GCCTGCCTAG CAGGACCATT 8520

CGGCAAAGCC CCAACATAGT CATAATAAAA ACGGTCGTTG TAAATCTTCC AAATCAAGTC 8580

ATAGAGAGAG TGGGTTTTGG CATACAAGCG CCAAGAAGCT AGGATATCCA TGAATTGCTT 8640

TAGTTTTTCA GCTAGAGCTG TGTGAATCAA GCCTTTTTGA CTACTTGCCA TTTTTTGTGC 8700

ATTGACCAGT TTCTCATAGA GATTTTCGTG GACTTTATCC TCTGCTTTCT GAAGGGACAA 8760

ACGTGCTAGC TCATCCTCAT CAAAACCAAA CATTGGAGAC TTCATAAGGG CAACCAAGGC 8820

GTAGTCTTGC AGGGGATTGT GAATGACACG AAGAGTGTCT AGCATGACTT GCACTTCTAG 8880

GGATTGGAGA TAATTGTTTT GCTCTCCGTC AGTTTTGACA GGAATTCCGT ACTCAGACAG 8940

GGCGAGGAGA ATCTGGTCAT TACGACTGCG GCTGGAGGTC AGAAGGGCAA TTTCCTTAAA 9000

GGCAACACCT TTTTCTTGAT GAAGTTTCAG AATCTCCTTG ATAACTAAGC GCATTTCGCC 9060

TGTTAGTTTC GTTTCTGTTT GACTCTCTTC TTCCTCACCT GTATCGTCCT TGTCGTAGAG 9120

GAGAAATGCT GCCTTGTTGT CTGGATTGGG AGTCAGTTTG GTATTGGCAA AAACAAGCTG 9180

GTGCTTGTTA TCATAGTTGA TTTCGCCGAC CTCTTGGTCC ATGAGACGTT CAAAGACATC 9240

ATTGGTTGCT GACAGCACTT CTGAACTACT ACGGAAATTT TCCTTGAGGA TAATGAGCCT 9300

GCCTTCTTGG GGATTTTGCG CATAGCGTTG GAATTTCTCA TTGAAAATCT GCGGGTCTGC 9360

CTGACGGAAA CGATAGATGG ATTGCTTGAT ATCTCCCACC ATAAAGCGAT TGTGGCCATT 9420

AGACAACAAT TCCAGCATCC GTTCTTGAAT ATGGTTGGTA TCCTGATACT CATCGACCAT 9480

GACTTCATGG AAGCGCTCCT GATAAGACTC ACGAACTTGT GGGAAATTCT CTAAAATCTC 9540

AATGGTGTAA TGGCTGATAT CAGCGAATTC GAAGGCATTT TCCTGTCGTT TTCTCTGACG 9600

ATAAGCCTCT ACAAAATCGC TCATGAAAGA TTGGAAGGTT TTAGCTAGTT TCCAAGTGTC 9660

TCCATGATAA CGTTCTTGAT AGTCGAGAAT CGCTATCTGG TCTGATAATT GTCCTAGTTT 9720

AGCAAACTGG GTCTTTCTCT CTTCGTTGTA GGCATCAGCC AGGGGCTTCA AATCAGCCTA 9780

CGGCTGGCAT TAGTCAGAGC TCGACCGTTT TTCTCCTTAG AGATGGCGAC AACACGCGCA 9840

AGCACTGCCT GATAAGCCTG ACTATCGGAC TCCTGATTTA GGGAGCCAAT TTCATCCAGA 9900

ATTAACTGAA CATTTTCTAA ATAGGCAGCC TTTGCAAACT CCTTGGCATC GTTATCCAGA 9960

TGGTAACGGA AAAAGCTTTC CAAATCCCAA AGGGCTTGTT TGATTTGCTC GGTCAGTTTT 10020

TCTTTTTCAC TGGTAAAATC AGCTTTCTCA AATCCTTTGA GGAAAGATTC ACTCAGCCAC 10080

TTTTGAGGAT TACTGGTGGA TTGGAGGAAG TCATAGATTT TATAGACCTG CTGGCGCAGA 10140

CCCCGTTCGT CCTTGCCACG CCCAGCAAAG TTTTTCAGCA AATGACTAAA GGTCTCTTTC 10200

TGTTTACCTT GGTAATGCGC TTCAAAGACC TCATGAAAGA CTTCGTTTTC GAGAATAAGT 10260

TGCTCGCTTT GGTTTTGTAA AATACGGAAA TTAGGTGCAA TATCAAGCAG ATAACCATGT 10320

TTGCCAAGGA ATTTTTGTGT GAAAGAATCC ATGGTTCCAA TGGCAGCGTT GGGTAGGTCT 10380

GCCAACTGGC GACCCAAGTG TTGTTTGAGG TCGACATCAT CTGTTTCTTG GATTTTCTTG 10440

CTGATTTTTT TCTCTAAACG TTCTTTAAGT TCAGTTGCAG CCTTGACGGT AAAGGTTGAG 10500

ATAAAGAGTT GAGAAATTTC GACACCACGC GCCAATTGGT CCAGAATGCG CTCTGCCATG 10560

ACAAAGGTCT TTCCAGAACC AGCCGATGCT GAGACCAGGA TATTCTGGGC AGAAGTGTAG 10620

ATAGCTTCGA TTTGCTCGGC AGTTTTCTTC TGTTCCTTGC TCGAATTTGC TTCTGCTTCT 10680

TGCAGTTTTT GAATCTCCTC CTCACTTAAA AAGGGAATAA GCTTCATCGA TTCAACTCCT 10740

CTCTTATTTT TTCAAGCCAA GCTTGCTTGA GTTTTTCTCC GACCAGACGC TTGCCATCAG 10800

CTAGGTCCAA CTTTTCTAGG AAACGGGCTT GGCCCAGATG GTAATTGGCT TCAAAGCCTG 10860

TAATAGCCTG ATGTTGCTGG ACGTATGGGG CAATGCTTCT GCCATTTTCA GTATAAGGAT 10920

TGATGGCGAA CCGGCCTGCT AAAATCTTCT CAGCAGCTTT CTTGTAAAGA TAGGCATTGT 10980

AGTCCAGTAG GAGCTGAAAT TCCTCATCTG TCAGTTGATT AGCCTTGTTT TTGTTATAAA 11040

ATTCGCCTAA ATAACTGCTT TCTTTTTCCA AGAAGAGCCC TTGGTATTTC ATAGATTTGC 11100

TGGCTTCTAC CACTGCTCCT GCCAGACTTT TTACCGCCAT CAGAGATTGG ACAGGTTCAG 11160

CCATTTCCAA GTACATGGCG CCGAAAAAGT TCTGCTCCCC TTCTCTTTTT AGGGCAGCAA 11220

GATAGGTTGG TAACTGAGAA TTGAGCCCAT TAAAGAAATG AGGAAACTGG AACTGAGTCA 11280

GACTGGATTT GTAGTCTACT ACTCCTATCG CTCCATTAGC TTTCAAACGG TCAATCCGGT 11340

CCACCTTGCC TCGTACAAAG ACACTGCGTC CATTGTCTAA TTGAATAAAG GCTTGGTCTT 11400

TTCCACCAAA ATTTGCTTCT TCTTTGATGG TTTCGATGGC TGGATTGTGT CGGAGAATAT 11460

GTCCAGTTGT CCGTGCAACA TCAAGCAAAA CTTCCTTGGT AAACTGGGCT TCCAAACTTT 11520

CTTGATAAAT AGCTTCAAAT TCGCGTTCTT GACTGGTTTC TTGAATAGCT TGTTCTAGAC 11580

GTTGGTCAAA GGAATCTTCA TTAGGCAACT GTAAGGCGCG TTCAAAGATA CGATGCAAGA 11640

AATTCCCGTG ACTACGGGCA TCAGGATGCA AACGTAATTC CTCCTGCAAG CCTAAAACGT 11700

AGCGTAGGAA ATAACTGTAT TCATTGCGAT AAAACTCTGT CAAACCCGAC GTAGACAGGT 11760

AAAACTCCTG TTTGGCAGGA TAGAGAGCTT GCAAGGTGTC CTTGGCTAAG GTCTTGCTGC 11820

TTGGACTGGT TGGGATAGCT GGATTTTCCA GACCTTGCTG ATCTAGTTTT TTACCTATGA 11880

CACGCGACAG AACCTTGACA AAAGTCAAAT CTTGCTCAGT ATCGCTCATC TCACCCTGCT 11940

GGTGATAGGC AACCAGACTA GACAAAAGAC TGTGATAGGA CCCCATATCC TCCTTAGACA 12000

GTCCTTTGTG ATTCATCCTC TTCTCTCTCC GCCTAAATCC AAAATGGATC AACTCTTGAA 12060

GATAGGCAGA TTCCTTACTT TCACTTTCGT TAAAAAGGCT TGGAGCCGAC AAGAACAACT 12120

GCTTACGAGC AGAATTGACC AAGGAAAGCA TAGTGTAGCG ATTTTTCTTG AGATTTTCAC 12180

TGCTGGCAAT CAGTAATTGA ACGCCTTCTT CGGTCGCTTG GTTTAGGTTT TGCCTTTCTT 12240

CATCTGTCAG AAGACTGGTG TTTTGAGAAA TTTTTGGTAA ATTGTCCTGA GTTAGTCCAA 12300

TAGCATAGAC AAAGTCAGCA GTCAATGGTG CAATCAAATC GTAACTCTGC ACCAGAACAG 12360

TGTCCACTGT TGCTGGAATG GTACGGTATT GGGACAAACT CATTCCAGAA TGGAGCAAGG 12420

CTAGGAAGTC TTCCAGACTA ACCTGTGAAC CAGCAAAAAC AGTCGCAAAT TGTTCTAAAA 12480

CATGGCAGAA AGCCTTCCAA ACTTCGGCTT GTCTTTCCTG TTCTACAGCT TCCAAAGTGG 12540

TTGTCAAATC TTGTAACTGC TTGGTCACAG CTCCTTCTTT TAGAAAGACA CTCCATTTTT 12600

GTAGGAGTTT TTCAGCCTTT TGTTTTCGGC TGGCAAAGAG GGTTTCAAGA GGTGCTAAAA 12660

TTCTCAGGCG GAGGACATTC AAACGCTCAA GATTAAATTT TCCATGGTGG GATTTGGTGA 12720

AGGTTTGCTG AAAGGCTGGC AAGCCATTGA TACCAAGATA GCGGATATAT TGCTCAAAAG 12780

CATCAATATC AGACTGACTG AGGTCAGTAT ACAAATCAGT TCTAAGAAGA TTAATCAAAT 12840

CCTCCTGACG AAAACGGTAA CGTTTTAAAG CTAAAATAGA CTCGACAAAC TGAGTCAAGG 12900

GATGATGAGC CATGGCTTCG CTTCTACCAA GATAAAAAGG AATCTGATAC TGGTCAAAAA 12960

TGGTTTTGAG AGATAACTGG TAAGAAGCTA CATCCCCCAA GAGAATACGA AAATGCTTGT 13020

AGCTCAGGTC TGAGTTCTCA TGTAATTTCT GACGAATACT ACGGGCTACT AGCTCCAACT 13080

CCTCCTTTTG CGTCAAACAA GACCAGATTT GTAAATTTTC ACGGTCTTTC TCATCGACAT 13140

CCAAAGCGAG TTCTGAAAAG TCATAAGAAG ACTCCAACAA ACGAGAGGCC TTGTCAAAAC 13200

TATCCATCTT CTCATGAGTT TGAGAACAGT CCTGAGCAGG CGTTTGGTAT TTAGAAGCCA 13260

GATGATGGAG AAATTTTACG CTGGCTTGGT AGAGATTGCC CTCGCTAAAA GGACTGGTAT 13320

AGGCTTTCTT ACTAGCATAA GCCCCGATAA CAATCTCAAC ACCTTTGCCG TGAAGTAAGT 13380

CCACAACCCG CTCTTCCTCA GCAGAAAAAC GAGTAAAGCC GTCAATGACC AAGGCGATTT 13440

GATTAAAATC ACTACTTACC TTGTCATTCT CAATAGCCTC AATCAAATGG GACAACTGAC 13500

TTTCCTGGGC TAACTGACCT TGATTAAGAT AGGCTGTTAC TTTCTCAAAA ATCAAGAGTA 13560

AATCCGCCCT CTTATCCTCA TCTGTTAAAT TCTCCAAGTC CAAAAAACTC ATCTGAGATT 13620

TGGTCATCTC ATGGTAAAGC TCAATTAACT GCTGGATCAA TTGAGGATCC TGCTTAATAG 13680

CGCCATAAAC ACGCAAGTCC TTGGGATCGA GTTCGGCAAG GCATTTGTAA AAGGCCAACC 13740

CAAGACCGAT ATCATCAAGA GTAGTTTTAG CTGGTAAATC ATTCAAGACC AGATAGCGAG 13800

CCATTTGAGC AAAGCGCGTG ACGGTAATCG AAAAAGAAGC CTGCTGGGAC AAGTATTCCA 13860

GCACGGCGCG TTCCTTTTCA AAAGAAAGAG AGTTGGGGGC AATGTAGAAG ACCCGCTTGC 13920

CAGCTGCAAC TAGCTCTTCT GCCTCTCTTG TTAGAATTTC TGTCAAAGAA GTCCGAATAT 13980

CAGTATAAAG TAATTTCATC TCAGCCTCGT TGGAATTTTT CATCACCCTA TATTATACCA 14040

TGATTAGCCT CGTAAATCTG TTAAAATATT TAGGCCATCC TTTCTTTTCT TCATCATCTG 14100

CTAAATCTTA AATACTTAGC TTTACTTGTA TTAGATAGAA TAAGTCTGGC TACTGAAAAT 14160

CACATAATAA AAAAGCCTCG GTAACAAGGC TTTGAGTTTT ATGATTGTTT CTTAGGTACG 14220

GAATACACTT CAATGTGTTG TCCCAGTATC TTAATGTCGA CTGGTAGATT GTCTGATTTA 14280

TCGCCATCAA CATCGGACTC TAATTCGATA TCAGAAGAAG TTTTAATATT ACGTGCCTTT 14340

ATATATTCAA TATTCTTGAT AGAATGATTG AACTATAGTA AATTGAAACT ATAATAGTAC 14400

ACCGTGGATG CTAAAATATT TCTAGAAATT AATTTGATTT CCCTAATCAA GCTATTCGTA 14460

TCTTATTTCA ATCTACTATA ATAAAATGAA CCAAAAATAG TACACAATGT GGTATAATCT 14520

TCTTATGGCA TATTCAATAG ATTTTCGTAA AAAAGTTCTC TCTTATTGTG AGCGAACAGG 14580

TAGTATAACA GAAGCATCAC ACGTTTTCCA AATCTCACGT AATACCATTT ATGGCTGGTT 14640

AAAGCTAAAA GAGAAAACAG GAGAGCTAAA CCACCAAGTA AAAGGAACAA AACCAAGAAA 14700

AGTTGATAGA GATAGACTTA AAAACTATCT TACTGACAAT CCAGATGCTT ATTTGACTGA 14760

AATAGCTTCT GACTTTGGCT GTCATCCAAC TACCATCCAC TATGCGCTCA AAGCTATGGG 14820

CTACACTCGA AAAAAAGAAC CACACCTACT ATGAACAAGA CCCAGAAAAA GTAGCCTTAT 14880

TTCTTAAGAA TTTTAATAGT TTAAAGCACC TAGCACCTGT TTAGATTGAC GAAACAGGAT 14940

TCGATACTTA TTTTTATCGA GAATATGGTC GCTCATTAAA AGGTCAGTTA ATAAGAGGCA 15000

AAGTATCTGG AAGAAGATAT CAGAGGATTT CTTTGGTTGC AGGTCTAACA AATGGTGAAT 15060

TAATCGCTCC AATGACTTAC GAAGAGACGA TGACGAGCGA CTTTTTTGAA GCTTGGTTTC 15120

AGAAGTTTCT CTTACCAACA TTAACCACAC CATCGGTTAT TATAGTAAAA TGAAATAAGA 15180

ATAGGGGGGG GGGGGGAGGG GGGGGGAGGG AGA 15213

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6004 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

TTATTACCTG AAACATTAAA TTTAATTGGA CATCCCGTTA TCAATTTTAT AATATCATCA 60

AGATTTTTAT TATCTGATTC AGGAATTTTA TCTGATATAA CAACACCATT TTCAAGATAG 120

TTCATTAAAT TATTTGATTC ACTAACATTA GTGTTTTGAT CTCCATCAAG CCAAAAATAA 180

TGGTTATCGG AATCTAAATA CGATGAGTTT AAAATATTAT TACAAATTAT TTGATTTGCT 240

CCACCAGGAA TATATCTCAC TACTAAATTC TGTTTAAGAT TCTCACTACC TGAATGAGTG 300

ATAACAAACT CTAGAATATA TTTAGCTAGT CTATCTTCAA CATAAATCAT CTTCCTAGAA 360

TGATACACAT CACCTAATTC AAAAAATGCA TCCTGATAAT CAATATTTTC AATAACATCT 420

ACCTTTTCTC CGTTTTTCAC TAAAAGTTTC ACGGCTTCTC TAGGAAAATC TTTTATAAGT 480

TGTGTAGAAT GTGTAGTGAT AATAATTTGA TGTTTTTTAT TTAAACACTC TTGAAGTAAA 540

AACTCTTTAA ATTTATAGAT TGCACTCGGA TGAAGTGAGA TTTCAGGTTC ATCTATTAAT 600

ATTAATGAAT TTGATTGCGC ATTTACTATA TCATTTACTA ACAAAATAAT TCTAGCCTCA 660

CCTGTTCCTG CAAAAGCCTC GGAATATTCT TTTCCAGATT TTTTCATCCA AATAGTTTTG 720

GAAGCTTTTA TATCATCACC TTTTGAATAC AACTTATGTG TTAAAATTTG AATGTCTGTA 780

TAAGATTCAT CCATTATTTC ACTAATAATT TCACAAACTT TATCATCAAC TTTAACATTA 840

TCTATAACCA TTTCCTTTTT ATAACGCGTA TAGCTACTTG TATTATTCTT TAAAATATCA 900

GCAACTGGCT TAGATCGTAA TCTTATAAAA TCTTGTTTAC TACGTTGAGT AGAAATTTTT 960

TTAAAATTAT AGTGATAGAA AAATAAATCA AAAGCAGAAA CATATTCTTT ACAATCACAA 1020

AAGACAACAT TTTTTTCAAT GCCATCCCAT CTGTCTGTCG AAGAACTTCC AATATATTTA 1080

TTTTTGGGTA ATCTTTCCAT CTCATATTGT TTTTGAGGAG CATATGGTTC CCAATAATCT 1140

AATCCTTTTT TTGTTCCAGA ACGGCCTTTA AGAACTTCTA CATTTCTAGA AGCTTTAATG 1200

TTATAATATG AATAGATTAA ACATTGTTTC CCATCCACTT CATCTATTTG ATCAACATTT 1260

GTACTAAACC AATATTCAGA CACACTTTTA TTGGCTGGAG AACCATATAA AGCTTGTAAA 1320

ATTGAAGTTT TATTTACTCC ATATCTATTA CAGACACCTC AGGATTATTT AACTTATAAG 1380

TTTTAACAGC TACGGAATCA ATTTCAACAG CAACTTGAAC ATCTATGCCT GATTTTTTAA 1440

GGCCACTTGT AGTGCCACCT GCACCGTTAA ATAAATCAAT AGCAACAATT TTCCCCATAG 1500

TATTCTCCTA AAGTTTCTCC TTTTTATTAT AACATTATCA AATGTAAAAC CCAACCCGAT 1560

AGGGTTAGGT TTTTAACATC ATTTCACCAA CTTCTTCATC TCATCAATAC GTGCGACGGT 1620

CGCGTCATAT TTAGCTTGGT AGTCAGCTTG TTTGTCGCAT TCTTTTTGGA CGACTTCTGG 1680

TTTGGCGTTG GCTACGAAGC GTTCGTTAGA GAGTTTCTTA CCAACCATGT CCAGTTCTTT 1740

TTGCCATTTA GCAAGTTCCT TGTCGAGACG GGCCAGTTCT TCTTCAACAT TGAGGAGATC 1800

GGCCAGTGGC AGGTAGATTT CTGCTCCTGT GATGACACTT GACATAGCCA GTTCAGGTGC 1860

AGGGATGGTT GATGCGATTT CCAAGTGTTC TGGATTTGTA AAGCGTTTGA TATAGTTGAC 1920

ATTGCTGTTA AAGAAGGCTT CCAAGTCGCT ATCGCTTGTC TTAACAAGGA TGGTGATAGG 1980

CTTGCTTGGT GCTACATTTA CTTCCGCACG CGCATTCCGA ACAGCACGAA TCAAGTCTTT 2040

GAGACTTTCC ACACCAGTGT GAGCCGCAAG GTCTTCAAAG GCTAGATTAA CAGTTGGGTA 2100

TGCAGCTGTC ACGATAGAAC CTTCTGAGAT TTGTCCAAAG ATTTCCTCTG TCACGAATGG 2160

CATGATTGGG TGAAGGAGAC GAAGGATCTT GTCCAGCGTA TAGAGGAGAA CAGATCGAGT 2220

AATGACCTTA TCGTCTTCAT TGTCGCTGTA TAGAACTTCC TTGGTCAACT CAACATACCA 2280

GTTGGCAAAT TCTTCCCAGA TGAAGTTGTA AAGGATATGA CCAGCCACAC CAAACTCGAA 2340

CTTATCAAAG TTTTCAGTAA CTTTTGCAAT GGTTTCGTTG AGATTGTGGA GAATCCAGCG 2400

GTCCGTCACA TTACCAGCCT CACCTGTTGC AACTTTTGTG ACATTGTCAT GCGCCACATC 2460

CAGCGTCAAA CCTTCATTGT TCATGAGGAT ATAGCGAGAA ATGTTCCAAA TTTTGTTAAT 2520

AAAGTTCCAT GAAGCATCCA TTTTCTCGTA AGAGAAACGA ACGTCTTGAC CTGGTGCGGA 2580

ACCGTTTGAA AGGAACCAAC GAAGGGCATC AGCACCGTAT TTCTCGATGA CATCCATTGG 2640

GTCAATCCCG TTACCGAGAG ATTTAGACAT CTTGCGTCCT TGCTCGTCAC GGATGAGACC 2700

GTGGATAAGC ACGTTTTGGA ATGGCTGACG ACCAGTAAAT TCCAAGGACT GGAAGATCAT 2760

ACGAGACACC CAGAAGAAGA TGATGTCGTA ACCTGTTACC AAGGTTGAAG TTGGGAAATA 2820

ACGTTTAAAG TCTTCTGAGT CGACTTCAGG CCAGCCCATG GTTGAAAATG GCCAGAGGGC 2880

AGAACTGAAC CAAGTATCCA AGACGTCTTC GTCCTGAGTC CATCCGTCAC CTTCTGGAGC 2940

TTCTTCGCCG ACATACATTT CACCATCAGC ATTGTACCAG GCAGGGATTT GGTGACCCCA 3000

CCAAAGCTGA CGAGAGATAA CCCAGTCGTG GACATTTTCC ATCCATTGAA GGAAGGTATC 3060

GTTGAAACGA GGTGGGTAGA ATTCGACCTT GTCCTCTGTG TCTTGGTTAG CAATGGCGTT 3120

CTTAGCCAAT TGGTCCATCT TGACGAACCA TTGAGTAGAC AAGCGTGGCT CAACTACGAC 3180

ACCTGTACGT TCTGAGTGAC CAACACTGTG GACACGTTTT TCGATTTTGA CAAGGGCACC 3240

GATTTCTTCC AACTTAGCAA CGACTGCCTT ACGAGCTTCA AAACGATCCA TGCCTGAAAA 3300

TTCAAAGGCA AGCTCATTCA TAGTTCCGTC GTCGTTCATG ACGTTGACTT GTGGCAAGTT 3360

ATGACGTTGG CCAACCAAGA AGTCATTTGG ATCGTGGGCA GGTGTGATTT TCACGACACC 3420

AGTACCAAGC TCAGGATCTG CGTGCTCATC TCCAACGATT GGGATGAGTT TATTAGCGAT 3480

TGGAAGGATG ACGTTTTTAC CAATCAAGTC CTTGTAGCGC GGGTCTTCTG GATTAACCGC 3540

AACCGCAACG TCCCCAAACA TAGTCTCAGG ACGAGTTGTA GCAACTTCAA GGGCGCGTGA 3600

ACCATCTTCC AGCATGTAAT TCATGTGGTA GAAGGCACCT TCTACATCCT TGTGAATCAC 3660

CTCAATATCA GAAAGGGCTG TGCGAGCTGC TGGGTCCCAG TTGATGATAA ACTCACCACG 3720

ATAGATCCAG CCTTTCTTGT AAAGGTTCAC AAAGACCTTA CGAACAGCTT TTGACAAACC 3780

TTCATCAAGA GTGAAACGCT CACGAGAATA GTCTACAGAA AGCCCCATCT TGCCCCATTG 3840

TTCCTTGATG GTAGTGGCAT ATTCGTCTTT CCATTCCCAG ACCTTCGTCA AGAAAGACTC 3900

ACGACCTAGG TCATAACGCG TAATACCCTC ACCACGTAAG CGCTCCTCAA CCTTAGCCTG 3960

AGTCGCAATA CCAGCGTGGT CCATACCTGG AAGCCAAAGG GTATCAAAGC CTTGCATGCG 4020

TTTTTGACGG ATGATGATAT CCTGCAAAGT CGTATCCCAA GCGTGACCAA GGTGAAGTTT 4080

CCCAGTTACG TTTGGTGGTG GAATCACGAT TGAATAAGGC TTAGCCTTTT GATCGCCTGA 4140

AGGCTTGAAA ACATCCGCAT CAAGCCATTT TTGGTAACGA CCAGCCTCAA CCTCGGCTGG 4200

ATTGTATTTA GGTGAAAGTT CTTTAGACAT GTGTGTGTCC TTTCTCTATT TTGTTTATTT 4260

TATTTTGAAT TTGCTTAGCA GCTTCTTCTG CAGACAAATT CGTATTATTT ATTTTAAAGT 4320

AGTGGTGCAA CTCATTCGGT TGATGTTGGG AATTTAATTG AAGTGTTTCA GCGGTCTCTA 4380

AAATTTCTCT TTCAGATACC TCAATATGTC GTTTTAAGGG TTTGTGCTTT AATCGATTCT 4440

CCGTTCGATT TCGACGTATG CACTCTTCAA GACTTGTTTC CAATTCAACA AACAGAATCT 4500

CTTGATGAAA GTTATCCAAT AAATCCTGAA TTTGCTTTAA ATACATCAGC TGGTACTGAT 4560

TTGAAAAATC AATTACGTCT GTTAAAATTA CTGATCGCTG ATTTCTTGCA CTTGCTCCAA 4620

GGAAAGAAAA GGTAATTCCA CGAACAAATT CCCACATCTC CTCGGTATAA TCCTGATAGA 4680

TCTCTAGTGC AAAATCAATG GCTTGATGGT TATAAAATAG GGTAGCATCC GTCAGTCGAG 4740

ATAATTCTTG ACCAATGGTC ATTTTTCCTG ATGCTGGAGC ACCAATGATG AAAAGATGCA 4800

TCAAATCACC TCCCACTCAC TCCTCAGCAA GCCATATCTC AAATCATCAC AGCAGTTGCC 4860

TTGAGCATCT TTGCGGTCTC TTATGCGAGC TTCGAGGGTA AAGCCAAGCT TTTCCGAGAC 4920

TCGTTGACTT TGAAGGTTAT ATCCAAAGCA AGTTAGTTCA ATCTTGTGAA GACCAAGTTC 4980

TTTAAAAGCT AGATCAATCA AGGAACACGC TGCTTCTGGA ACATAACCTC GACCCCAATA 5040

GTCTGGGTGC AAGGTATAGC CAAGCTCTAG CACATCATCC GCATGAAGAT GGTTGAAGTC 5100

AACAGAACCA ATGACTTTAT CGGTTCCTTT GACGACAATC CCATAGCCAG CTGGGAGATT 5160

TTCCTTTTGA GTACGCTCCG GAAGAATGTG CTCCAGATAA TAAATCTCAT CTTCCAAGAT 5220

CTTGACTGGA GGAAAACCTG CTGGATAGGC GACCTCTGGC AAACTAGCGT AGGTATGGAT 5280

ATCCTCAGCA TCCACCACTG TGCGGACTCG TAAAACGAGA CGTTCTGTTT CGATTTTATC 5340

TGGCAGCTCA GTTCTTGCCA TCCTTCTTCC TCGCTTTTTT GATGAAACTG CCCTTCATAT 5400

CTACACGCTT GTCCAGATAG CGATAAACGC GCTGATATCC ATCTCCCATG AAATAGGTTG 5460

GGGCAAACAG TTGATTTTTA AAATGTCCCT TTTCATCCAG GAGTTCTGGG GCAACAAGTC 5520

GCTCAAGAAT CTTGGCAAAG ATGTGGCAAA TACCGTCTTC CTCAACAATC CTATCTACCC 5580

GACAATCTAA AACAAGTGGA CAGGCGTCTA AAATAGGAGT CTGAGTTCGT TCAGAAATTT 5640

CATAATGCAC TCCCAAACGT TCCAATTTCT CCTGATGACT GATAAAACCA GCCTGCTCCA 5700

TCGCAAGCAT AGAAGTTTCA TCAGAAATAT TCACAGTAAA TTTTTGATAC TGTTTGATCT 5760

GCTCTGCGGC ATTCTCTCTC GCAACGACTC CAATCACAAC CCAATCTCCT AGACTATAAG 5820

AGGAACTACA GGTCGTGATG TTATAGCCAA AATTCTAATC TTGATATCCT AAAATAAAAA 5880

CAGGAAAACC ATAATATAGT TTACTTGTGT TAAAAGATTG CTTCATAACA ACCCCCTTTG 5940

ACTAAGACGT AAAAGAAAAG CCCTGCCATC TACATGACAG GGACGAATGT GTTTATCCGC 6000

GGGG 6004

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5857 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

TGTAGAATTC ACGACAATGC TTCGTTGATT TCTGGGTTGA TTTCGTCGCG TTCTGGCAAG 60

CGAGTCAATG AACCAAAAAT AGTACACAAT GTGGTATAAT CCTTTTATGG CATATTCAAT 120

AGATTTTCGT AAAAAAGTTC TCTCTTATTG TGAGCGAACA GGTAGTATAA CAGAAGCATC 180

ACACGTTTTC CAAATCTCAC GTAATACCAT TTATGGCTGG TTAAAGCTAA AAGAGAAAAC 240

AGGAGAGCTA AACCACCAAG TAAAAGGAAC AAAACCAAGA AAAGTTGATA GAGATAGACT 300

TAAAAACTAT CTTACTGACA ATCCAGATGC TTATTTGACT GAAATAGCTT CTGACTTTGG 360

CTGTCATCCA ACTACCATCC ACTATGCGCT CAAAGCTATG GGCTACACTC GAAAAAAGAA 420

CCACACCTAC TATGAACAAG ACCCAGAAAA AGTAGCCTTA TTTCTTAAGA ATTTTAATAG 480

TTTAAAGCAC CTAACACCTG TTTAGATTGA CGAAACAGGA TTCGATACTT ATTTTTATCG 540

AGAATATGGT CGCTCATTAA AAGGTCAGTT AATAAGAGGC AAAGTATCTG GAAGAAGATA 600

TCAGAGGATT TCTTTGGTTG CAGGTCTAAC AAATGGTGAG TTAATCGCTC CAATGACTTA 660

CGAAGAGACG ATGACGAGCG ACTTTTTTGA AGCTTGGTTT CAGAAGTTTC TCTTACCAAC 720

ATTAACCACA CCATCGGTTA TTATTATGGA TAATGCAAGA TTCCATAGAA TGGGGAAGCT 780

AGAACTCTTG TGTGAAGAGT TTGGGTATAA ACTTTTACCT CTTCCTCCCT ACTCACCTGA 840

GTACAATCCT ATTGAGAAAA CATGGGCTCA TATCAAAAAG CACCTCAAAA AGGTATTACC 900

AAGTTGCAAT ACCTTTTATG AGGCTTTTTT GTCTTGTTCT TGTTTCAATT GACTATATAA 960

ATTGTCTAAG CGAAACAACC GATAAGAATT GGCACAAAAG CGACCGTATT TTTGTTACCA 1020

ATACAGGAAA AACAGTTCAT AGTTCTATCT TGAGCAAGTC TCTCCAGCGA GCAAACGAAC 1080

GCCTTAAAAA ACCAATTCCC AAACATCTGT CCCCTCACAT CTTCAGACAC ACCACTATTA 1140

GCATCTTATC AGAAAATAAA ATTCCTTTAA AAACAATCAC GGACAGGGTT GGTCATCCCG 1200

ACTCTGAAGT CACTACTTCC ATCTACACCC ACGTCACAAA GAACATGAAA GATGAAGCAA 1260

TCAATGTACT GGATAAAGTT ATGAAAAAGA TTTTTTAAAA AGTTTTGTCC CTTTTTTGCC 1320

CTCTAAATAC AAAAATAGCC CTTCGGATAA AATCCGAGGG GCTAGAAACG TTGTTAAATC 1380

AACGGCCGAA CTTTTGAATT TCATGGTTCG GGATAAAATA GTTCACTGAA CTATTTTATT 1440

TTTTAAGGTT ATCATAATAT CAAATAGTTC AATTAAATAC GCTAAATTAC TAATATACTT 1500

TTTACCTTTT TCATTCTAAA ATGTAAAGTA CAAACAATTA CAATATACTA GAGGGGGAGT 1560

AAAAAAGGTA TTAAATCGAT GAGTTCAGCA GGCAAGAAAA TAGCACCTTT ACGGGTGCTA 1620

TTTTTTAATT AACGCCACGT TAACTTTTGA TTGATGAATT TTATTGTTTG GCACTTCTTT 1680

CATTTCACGG TAAACATCGA TGAAATTCTT TCCAACATTA TTTTTGGAGT TAACTGCATT 1740

TATTTTTGTA TTAATAACTT TTTTAGTATC GAAAGAATGG TTTAAGAAAT CCATAACTAA 1800

CTCTCCTTTC TCATCCTGTA ATCAAGATTT TTATCAATGT CAAAATAGTA TTTTCTATCA 1860

ATCCAAATTG GTCCTTCTCC TTTAGAAATA GCAAGTACAT CTACCGGACC TCCTACTGTT 1920

TCAAGAGTGT TGACAATTTT TCTCTTAAAT GAAGTTAATT CAATAAATGT TTTAGCTGTA 1980

CTCGCCATTT CATTAAGTGG TTGCATTCCA ATAAGGTCTA TTATAGGATT TATATAATAT 2040

TTTTGCTGTA TAGATGATAT ATTTTCAAAT ATATTCTCAA TTTCATCACC CAATCCATTT 2100

TTCTCCATAA CTGATGATAC TTGCTCTGCG ATATATACAT TTAAGTTAGG ATCTATACCA 2160

TTCATAATCG TCTCAACCAT CTCTGACTGT GCAAAAGGGA TTATATGACA AGTTTTATGA 2220

TGATTTATCA CACTTTCATT AATAACTTTC CAAATTAATC GTTTAGAAAA AATTCCATAT 2280

AATTCAATTT GTCTTATAGA TGGAAATATC TCGTCTGTAC CATAACCTGC TATAACTAAT 2340

CCAGTTATGT TTGTTGAGTC ATATCCAATG AAAATCGCTT TATATAAAGA TTTAGCAATA 2400

ACTTCAACCT CATCATCAGT ATGAGGAAAG GATTTAAAAA CATCGTCTAC AATGCTTTTT 2460

ATTAACTCTA ACTCAGCTTC AAAAAATTCA AAATTACTTT CAGCTTCTAC TTTTGAAATT 2520

TCTAAACTAA AATTAGTTAT AGCATTTAAT AAAATTTTAT TAAAATCATC TAGAGTGATG 2580

GTTTCACCAT TAGAAACTCT TAAATCAGCT GTTTCTTGCG CTTCATAGGC AATGCTGTCC 2640

AAAATACTTC TTGTACTTCT GACAATATAA TTTCTTAATA AATCCTCAAC TTGTAGATGT 2700

TTAAAGGAAA TTAAAAATTC TATTAGCTTT TCAACGTATT GGGCAGTATT ATCTAATAAA 2760

TCTGTGCCAA TAGCCTGCTT AAACTCATTT AAAATTACCT CCCACGGAAT TTCCATAAAC 2820

GAAGCGTTCC CATATATCAT GATCCCCACG GAATGTTCTT TTGATAAAGT GAATAATTTT 2880

CGGGCGCTAT TAAAAACTTT TGAATTTTTC CCGTCTGATA AGGTTACAGC GCTATCAGAA 2940

GCCAATACAA CACCATTTTT ATTTAATATT CCAATTTCTG CTGTCAAAAT ATCACCTAAA 3000

CTTTCTAAAC CTGCTCATGC TCTAATGGTA CAACAGCTAA GGTCTTACCA AGACTTGCCA 3060

ACACTTTTAA TACTGTATCA AGTTGTGGGC TTGTCTTTCC TGTTTCCATT CTAGCGATAA 3120

CTGGCTGACT AACACCGCTC ATCTCCTCTA GTTTCTTCTG ACTAATACCC TTTTCATTTC 3180

TAGCCTCGAT AAGCTCACTC ATGATAGCCA CGCGCATATC ACTTTCCAAA ATTTCCTCTT 3240

TGCTGAATAA TTCAGCTCTT ACATCTTTCC AGTTACTACC AATAGCATTA TTTTTCATTG 3300

TCTAAACCTC TTTCTTTTAA ATCTGCAAGT TCACGTTTAG CTTGCTCAAT CTCTCTTTTG 3360

GGTGTTTTCT GTGTCCTTTT CATAAAATGA TGCAGTAAAA CAAAACTACC ATCCATCCAA 3420

GCAACAAATA AAATTCTATC TCTAAGTGGT CTCAGCTCCC AAATTTCAGC ATCTAAATGC 3480

TTAATATATG GTTCGCCTGC GCGTGTTCCA TGTTGGCTTA ACAACTCAAT ATAATCATTA 3540

ATTTTATTAA GCTTAATTCT GCTATCTTTC CCTTTTTTAC TGGTAAGCTC TCGCATATAA 3600

TCAAAAACAG GCTCATTGCC GTTTTTATCC TTGTAAAAAT AGATATTATG CACTATTAAC 3660

ACCTCTTCCT AATAACAATT ATAACCTAAA AGTTATTGTT TGTAAATACT TTTAAGTTAT 3720

TAAAATAAAA AGCACCTAGT TTCCTAGATG CTAGCACAAT GACACGGATT CGCACCGTGG 3780

CTACCTCTAT CAAGGTGTAC TCCTTCTATA CTATCCCTTG TGCTTTAGAA TATTATACCA 3840

CACAATCAAC TAGATACCTA CCATCTCATG ATATACCCCC ATTTTGGGCA AGGGTACAAC 3900

GCTAAAATAC AAATCAGAAT AGATATTAAA CCACTTATTT AACTTATCAT AAGCTGGTGA 3960

TTGACTGATA AATAATATCC GCTGACAAGC TCCGATAACA TTCATGTGAT TGTACACATA 4020

AACCTCTTTT ACAGCCTCTA AAATGTCAGC CTCACTTGTT TGTACCCTAA TATCTGTTAT 4080

CTGCTTGATA GTTGCGTATT TTTGATAAGC TAGCATATCT TGATTTTTAG CAGCATCAAA 4140

CATTTTACGC TCAAGGACAC TATACTTAGG TTGTTCTTTA TCTCGCATGA AATACCACTT 4200

GAGCCATAAA ATCTTTTCTC GGTGTATTAC AGAAATACGC TCAATTTTCT TCTTTGTCAT 4260

TGCTACCTCC TAAATCATCA ATTTAACAAT TCTAACCACT CACTTTTAGA AATAGTTGCA 4320

TAGATCTTGT TCGATGTATG ATACAAAGGT TCTAAATCTT TTTCCACCCT AATATAGTTC 4380

ATCTTATCCT CATGAGTAGG AAAGTATAGT ATTTCCGTTT CATCCTCGTT TAGGATACGA 4440

TTGCACCAAT CATCAATAAT AACTGGCACT TCCCACTCAC GCCATTTTTT AAGGTTTTCT 4500

AAAAGTTCAT TATCACTAAA TAGCTCGCCA TCTATTTGGA AAAATTCCCC TAAGTCATTG 4560

TTTCCTTCAA CAATAATAAA CTCTGGCATA TTTCTATTAC TTAATAACTC CTTGAGTTCT 4620

TGTAACTCTT TGATTTCCTT TAGATACTTC CTCAATTTCC AACCTCAATT CTTCAATCTG 4680

CCTTACTACT CCAAAAATTT CATGGGTCTT ATAAGATTGT TCAAGTATAG CCTTTGCTGC 4740

TTGAGTTCTT ATAAACGGGT TGACCTTACT GTCCATCATA ATATCATTGA GTACAGAAAC 4800

AGCGTTAGAT GATGCTAAAT AAAGCATTTG AGTTGTTTTA TCCATCATCT CATCTTGCTT 4860

TATCCTCAAT GTCTTTTTAA CCGCTGCAAC TTTTAGATAC TTATGACCTG TTGCGCGTGA 4920

TACCCCTGCT TTTTGACATG CTTTGTCTAT CGTTGGCTCG GTAAGCATGG CATCTATGAA 4980

TTTAATTTGC TTGGACGTAA GGTTATCATT TTCATTTCCT GCCATCTATT ACCTCCTCAT 5040

TATCAAAATA AAGGGTTGCC CCTTTATTTC CCTATGCTAG ATAATTCTGC AATTCTGCAT 5100

CCATTGCCTC TGAATTGCCC TCAACAATCA TTTCATGCTG TACTAAATCA ATCTTATCTC 5160

CGTTAATAAG TAAACCACCG TGGAAATAAT CAATTTTTCT ATCAAGGAAA TGTACTAGCT 5220

TTTCAAGGCG TTGCTGTTGG CTGAATTGCT CCATGTCAAT TTCGATATAA GCAAGGGTAG 5280

TATCATTATC CATAATATCT TCTAATTTTC TAAGAGCTAG AGGTTTATTT TTATATTTTT 5340

CTAGGTATTC TCTCATTTCT GCCACTGTTA ATTTGATACT AGATAATAAA CTTAGTTCAG 5400

CTGCATCATC TGCTGTAATA GGCTCTTCTT TTGATTCATG GTTTGCTAGT TCAGCATTTT 5460

TCTCTTTTTC TAGTTGCTGA TACAATAGCT GAGCAGTATT TTGGGAATAG TTTTCGCCCT 5520

CTTTTTTATA TTTTAAAAGT TCTTGCTCTG CATACACTTT CCCGATAATC ACTTCCTTAT 5580

AAACTAATTG CCCATCTTGA GCTTTTAGCT TAATACTCCC ATGCTCTGGA ATTTCAATAT 5640

ACTTAATTAT ACCATTTTTT GAGTATAAAA CAAAGCCTTT CTCCATCATT TTTAATAATT 5700

TATCATCCTT GTTTTCAGTC ATGCTTTTCT CCTTTATTTC ATTTTATTAT AATCTGAATA 5760

CCCCTAGTCT ATTTATTTCA CTAGGTTTTT AGGGTTCGTA TGCTAAAATA CTACCCTTTT 5820

TGTGTACCTT ATGGCTGACT TTTCAAATTG GTTAGTT 5857

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10254 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

AAAATGATAG CAGGAGAGTT TTCCCGTCCA TCAGACCCAG AACTGAGAGC CTTAGCTCAG 60

GCTTCTCGCC AAAAACAGGC CGCCTTTAAC AAGGAAGAGA ACCCCTTGAA GGGAGCCGAA 120

ATCATCAAGA CTTGGTTTGC CTCAACCGGG AAAAATCTTT ACATCAACAC TCGCTTGATG 180

GTGGACTACG GTGTCAACAT CCATCTAGGG GAAAATTTTT ATTCTAATTG GAACTTGACC 240

ATGCTGGATA TCTGTCCCAT TCGTATCGGG GACAATGCTA TGATTGGTCC TAATTGTCAG 300

TTTTTGACAC CCCTCCATCC ACTAGATCCA CAGGAACGCA ATTCAGGTAT CGAGTACGGA 360

AAGCCTATCA CAATCGGAGA TAATTTCTGG ACTGGTGGTG GCGTCATTGT CCTTCCTGGA 420

GTGACACTGG GAAATAATGT CGTTGCAGGA GCAGGGGCAG TAATTACCAA ATCTTTTGGC 480

GACAACGTTG TCCTAGCTGG CAATCCTGCG CGCGTGATTA AGGAAATACC TGTTAAATAG 540

AAGTAAAAAG GAACAGCTGG GGTTGTTTCT TTTTTGTAGG TTTCATCATT TTTTACCCAG 600

TTCACATTTA CCTACTCTAT CTCTTAGCAA GTCTGTTTCA TTAAGCAAGT TCAAAGCATC 660

TCGTAAGTGG GATGTTTTTC TCCTCAGTTC ATCAGCTTCC TCCTTGACAC TCGGTCAGAT 720

TTTGATACAA TAGTACAAAA TTAGAGGAGG CAGGCTATGA TTCAGAAACA TGCGATTCCT 780

ATTTTAGAGT TTGATGACAA TCCTCAGGCG GTTATCATGC CCAATCACGA GGGGCTGGAC 840

TTGCAGTTGC CAAAGAAGTG TGTTTATGCA TTTTTAGGTG AGGAGATTGA CCGCTATGCG 900

AGGGAAGTAG GGGCGAACTG TGTTGGCGAA TTTGTTTCTG CCACCAAGAC CTATCCAGTT 960

TATGTCGTGA ACTACAAGGA CGAGGAGGTC TGTCTGGCTC AGGCTCCTGT TGGCTCCGCT 1020

CCAGCAGCCC AGTTTATGGA TTGGTTGATT GGCTATGGTG TGGAGCAGAT TATCTCTACT 1080

GGGACCTGTG GTGTCCTAGC TGATATAGAG GAAAATGCCT TTCTAGTCCC TGTTCGCGCT 1140

CTGCGAGATG AAGGAGCCAG TTACCACTAT GTGGCACCTT GTCGTTATAT GGAAATGCAG 1200

CCAGAGGCTA TTGCTGCTAT TGAGGAAGTT TTGGAAGACA GAGGGATTCC TTATGAAGAA 1260

GTCATGACCT GGACGACAGA CGGTTTTTAC CGAGAAACGG CTGAAAAGGT GGCTTATCGT 1320

AAGGAAGAAG GCTGTGCTGT TGTGGAGATG GAGTGTTCTG CTCTTGCGGC AGTAGCTCAA 1380

TTGCGTGGGG TTCTCTGGGG TGAATTGTTG TTCACAGCAG ATTCTCTAGC GGACTTGGAC 1440

CAGTACGACA GTCGTGACTG GGGCTCGGAA GCTTTTAATA AGGCGCTAGA ACTGAGTTTA 1500

GCAAGTGTTC ACCACCTTTA GTTGTACTGG CAAAGGATTT GTTTTATCAT AAAATGTCTA 1560

GCTCATACTT TTCAAAAATA TGTTTAAACG AGGTCACCTT CCTCTTGTCC TAGGCATGTT 1620

GAGGTTGGGA AAAATCTTTA AAATCAGAAA AACGTATCAT ATCAGGTGAT GAAAACTTTG 1680

ACACTATGCG TTTTATGTCG ATAAGATTTA GAGTGAGATG AAATGATACT CTTCGAAAAT 1740

CTCTTCAAAC CAGGTCAGCT TCACCTTGCC GTAGGTATAT GTTACTGACT TCGTCAGTCT 1800

TATCCGGCAA CCTCAAAACG GTGTTTTGAG CTGACTTCGT CAGTTCTATT TGCAACCTCA 1860

AAACAGTGTT TTGAGCAACC TGTGACTAGC TTTCTAATCG ATGCCTTGGT TTTCATTGCC 1920

TATAATCAAA AAGAGAAATT TTCTCCTGAA AAGCATATAG AGTAGCTGGC GTTAAAAGCT 1980

CCTGTCTTGC TTTTTTGACC TATAGTCACA TCTATCAAGT ATTGTTCTTG CCTAAGCTAT 2040

CAATAAAAAG GTGGCATTTT TTAGGCTTGG TGTTAGTAGA TTTTGCCTTA TCCTATCTAA 2100

GTCATTTCGA ACTTTTTATG GTACAATGGA AACATGTTAT TCAAATTATC TAAGGAAAAA 2160

ATAGAGCTAG GCTTATCTCG TTTATCGCCA GCCCGTCGTA TTTTTTTGAG TTTTGCCTTG 2220

GTCATTTTAC TAGGCTCTCT TCTTTTGAGC TTGCCCTTTG TCCAAGTTGA AAGCTCACGA 2280

GCGACTTATT TTGATCATCT TTTCACTGCT GTCTCTGCAG TCTGTGTGAC GGGTCTCTCA 2340

ACCCTTCCAG TAGCTCACAC CTATAATATC TGGGGTCAAA TAATCTGTTT GCTCTTGATT 2400

CAGATCGGTG GTCTAGGGCT CATGACCTTT ATTGGGGTTT TCTATATCCA GAGCAAGCAA 2460

AAGCTTAGTC TTCGTAGCCG TGCAACTATT CAGGATAGTT TTAGTTATGG AGAAACTCGA 2520

TCTTTGAGAA AGTTTGTCTA TTCTATTTTT CTCACGACCT TTTTGGTTGA GAGCTTGGGA 2580

GCTATTTTGC TTAGTTTTCG CCTTATTCCT CAACTTGGCT GGGGACGTGG TCTTTTTAGT 2640

TCCATTTTTC TAGCGATCTC AGCCTTCTGT AATGCCGGTT TTGATAATTT AGGGAGCACC 2700

AGTTTATTTG CTTTTCAGAC CGATTTACTG GTCAATCTGG TGATTGCAGG CTTGATTATT 2760

ACAGGCGGCC TTGGTTTTAT GGTCTGGTTT GATTTGGCTG GTCATGTAGG AAGAAAGAAA 2820

AAAGGACGTC TGCACTTTCA TACGAAGCTT GTACTATTAT TGACTATAGG TTTGTTGTTA 2880

TTTGGAACAG CAACTACTCT CTTTCTTGAG TGGAACAATG CTGGAACGAT TGGCAATCTC 2940

CCTGTTGCCG ATAAGGTTTT AGTTAGCTTT TTTCAAACAG TGACGATGCG AACAGCTGGC 3000

TTTTCTACGA TAGATTATAC TCAGGCTCAT CCTGTGACTC TTTTGATTTA TATCTTACAG 3060

ATGTTTCTAG GTGGGGCACC TGGAGGAACA GCTGGGGGAC TCAAGATTAC GACATTTTTT 3120

GTCCTCTTGG TCTTTGCACG AAGTGAGCTT CTAGGCTTGC CTCATGCCAA TGTTGCGAGA 3180

CGAACGATCG CGCCGCGAAC GGTTCAAAAA TCCTTTAGTG TCTTTATTAT CTTTTTGATG 3240

AGCTTCTTGA TAGGATTGAT TCTGCTAGGG ATAACAGCCA AAGGCAATCC TCCCTTTATC 3300

CACCTCGTAT TTGAAACCAT TTCAGCTCTT AGTACAGTTG GTGTAACGGC AAATCTGACT 3360

CCTGACCTTG GGAAATTGGC TCTCAGTGTT ATCATGCCAC TTATGTTTAT GGGACGAATT 3420

GGTCCCTTGA CCTTGTTTGT TAGCTTGGCA GATTACCATC CAGAAAAGAA AGATATGATT 3480

CACTATATGA AAGCAGATAT TAGTATTGGT TAAGAAAGGA AAGAGCATGT CAGATCGTAC 3540

GATTGGAATT TTGGGCTTGG GAATTTTTGG GAGCAGTGTC CTAGCTGCCC TAGCCAAGCA 3600

GGATATGAAT ATTATCGCTA TTGATGACCA CGCAGAGCGC ATCAATCAGT TTGAGCCAGT 3660

TTTGGCGCGT GGAGTGATTG GTGACATCAC AGATGAAGAA TTATTGAGAT CAGCAGGGAT 3720

TGATACCTGC GATACCGTTG TAGTCGCGAC AGGTGAAAAT CTGGAGTCGA GTGTGCTTGC 3780

GGTTATGCAC TGTAAGAGTT TGGGGGTACC GACTGTTATT GCTAAGGTCA AAAGTCAGAC 3840

CGCTAAGAAA GTGCTAGAAA AGATTGGAGC TGACTCGGTT ATCTCGCCAG AGTATGAAAT 3900

GGGGCAGTCT CTAGCACAGA CCATTCTTTT CCATAATAGT GTTGATGTCT TTCAGTTGGA 3960

TAAAAATGTG TCTATCGTGG AGATGAAAAT TCCTCAGTCT TGGGCAGGTC AAAGTCTGAG 4020

TAAATTAGAC CTCCGTGGCA AATACAATCT GAATATTTTG GGTTTCCGAG AGCAGGAAAA 4080

TTCCCCATTG GATGTTGAAT TTGGACCAGA TGACCTCTTG AAAGCAGATA CCTATATTTT 4140

GGCAGTCATC AACAACCAGT ATTTGGATAC CCTAGTAGCA TTGAATTCGT AAAGAGGGAT 4200

GACCCCTCTT TTTTGATGCC TAAGATGGCA AATAGAGACA GAAGCCCCTT GTCTTCTAGT 4260

AAAAGTTCTT CAAAGGCTGG ACTTTATGGT AAAATAGAAA GAAGTGACAA GAGAGAGTAA 4320

TACTCAATGA AAATCAAAGA TCAAACTAGG AAACTAGCTA CGGGCTGCTC AAAACACTGT 4380

TTTGAGGTTG CAGATAGAAC TGACGAAGTC AGTAACATCT ATACGGCAAG GCGACGTTGA 4440

CGCGGTTTGA AGAGATTTTC GAAGAGTATA AGAAAAAATC AGTCCCCTAA AGGAGTAGAT 4500

TATGAAGTTA TTGTCTATCG CAATTTCTAG CTATAATGCA GCAGCCTATC TTCATTACTG 4560

TGTGGAGTCG CTAGTGATTG GTGGTGAGCA AGTTGGGATT TTGATTATCA ATGACGGGTC 4620

TCAGGATCAG ACTCAGGAAA TCGCTGAGTG TTTAGCTAGC AAGTATCCTA ATATCGTTAG 4680

AGCCATCTAT CAGGAAAATA AATGCCATGG CGGTGCGGTC AATCGTGGCT TGGTAGAGGC 4740

TTCTGGGCGC TATTTTAAAG TAGTTGACAG TGATGACTGG GTGGATCCTC GTGCCTACTT 4800

GAAAATTCTT GAAACCTTGC AGGAACTTGA GAGCAAAGGT CAAGAGGTGG ATGTCTTTGT 4860

GACCAATTTT GTCTATGAAA AGGAAGGGCA GTCTCGTAAG AAGAGTATGA GTTACGATTC 4920

AGTCTTGCCT GTTCGGCAGA TTTTTGGCTG GGACCAGGTC GGAAATTTCT CCAAAGGCCA 4980

GTATACCATG ATGCACTCGC TGATTTATCG GACAGATTTG TTGCGTGCTA GCCAGTTCTA 5040

ACTGCCTGAA CATACTTTTT ATGTCGATAA TCTCTTTGTC TTTACGCCCC TTCAGCAGGT 5100

CAAGACCATG TACTATCTGC CTGTCGATTT CTATCGTTAT TTGATTGGGC GTGAGGACCA 5160

GTCTGTCAAT GAGCAAGTGA TGATTAAGTG CATTGACCAG CAACTCAAGG TCAATCGACT 5220

CTTGATAGAC CAACTTGATT TGTCCCAAGT GAGTCATCCC AAAATGCGAG AATATCTGCT 5280

GAATCATATT GAACTCACGA CGGTGATTTC CAGTACCCTG CTCAACCGAT CTGGAACAGC 5340

GGAGCATCTG GCAAAAAAAC GCCAATTGTG GACCTATATT CAGCAGAAAA ATCCAGAAGT 5400

CTTTCAGGCT ATTCGTAAGA CCATGTTGAG CCGTTTGACC AAACATTCTG TCTTGCCAGA 5460

TCGCAAACTG TCCAATGTCG TCTATCAAAT CACCAAATCT GTTTATGGAT TTAATTAATA 5520

TAAGTGTTTT ATAAGAGGGA TTTAAGAAAA ATTTTAACTT TTTCTTAGTC CTTTTTAATT 5580

TCAGGAGATT ATACTAGAGT CATCAAATAA AGAAAGACTC TAAGGAGAAT CCTATGAAAT 5640

TCAATCCAAA TCAAAGATAT ACTCGTTGGT CTATTCGCCG TCTCAGTGTC GGTGTTGCCT 5700

CAGTTGTTGT GGCTAGTGGC TTCTTTGTCC TAGTTGGTCA GCCAAGTTCT GTACGTGCCG 5760

ATGGGCTCAA TCCAACCCCA GGTCAAGTCT TACCTGAAGA GACATCGGGA ACGAAAGAGG 5820

GTGACTTATC AGAAAAACCA GGAGACACCG TTCTCACTCA AGCGAAACCT GAGGGCGTTA 5880

CTGGAAATAC GAATTCACTT CCGACACCTA CAGAAAGAAC TGAAGTGAGC GAGGAAACAA 5940

GCCCTTCTAG TCTGGATACA CTTTTTGAAA AAGATGAAGA AGCTCAAAAA AATCCAGAGC 6000

TAACAGATGT CTTAAAAGAA ACTGTAGATA CAGCTGATGT GGATGGGACA CAAGCAAGTC 6060

CAGCAGAAAC TACTCCTGAA CAAGTAAAAG GTGGAGTGAA AGAAAATACA AAAGACAGCA 6120

TCGATGTTCC TGCTGCTTAT CTTGAAAAAG CTGAAGGGAA AGGTCCTTTC ACTGCCGGTG 6180

TAAACCAAGT AATTCCTTAT GAACTATTCG CTGGTGATGG TATGTTAACT CGTCTATTAC 6240

TAAAAGCTTC GGATAATGCT CCTTGGTCTG ACAATGGTAC TGCTAAAAAT CCTGCTTTAC 6300

CTCCTCTTGA AGGATTAACA AAAGGGAAAT ACTTCTATGA AGTAGACTTA AATGGCAATA 6360

CTGTTGGTAA ACAAGGTCAA GCTTTAATTG ATCAACTTCG CGCTAATGGT ACTCAAACTT 6420

ATAAAGCTAC TGTTAAAGTT TACGGAAATA AAGACGGTAA AGCTGACTTG ACTAATCTAG 6480

TTGCTACTAA AAATGTAGAC ATCAACATCA ATGGATTAGT TGCTAAAGAA ACAGTTCAAA 6540

AAGCCGTTGC AGACAACGTT AAAGACAGTA TCGATGTTCC AGCAGCCTAC CTAGAAAAAG 6600

CCAAGGGTGA AGGTCCATTC ACAGCAGGTG TCAACCATGT GATTCCATAC GAACTCTTCG 6660

CAGGTGATGG CATGTTGACT CGTCTCTTGC TCAAGGCATC TGACAAGGCA CCATGGTCAG 6720

ATAACGGCGA CGCTAAAAAC CCAGCCCTAT CTCCACTAGG CGAAAACGTG AAGACCAAAG 6780

GTCAATACTT CTATCAAGTA GCCTTGGACG GAAATGTAGC TGGCAAAGAA AAACAAGCGC 6840

TCATTGACCA GTTCCGAGCA AAyGGTACTC AAACTTACAG CGCTACAGTC AATGTCTATG 6900

GTAACAAAGA CGGTAAACCA GACTTGGACA ACATCGTAGC AACTAAAAAA GTCACTATTA 6960

ACATAAACGG TTTAATTTCT AAAGAAACAG TTCAAAAAGC CGTTGCAGAC AACGTTAAAG 7020

ACAGTATCGA TGTTCCAGCA GCCTACCTAG AAAAAGCCAA GGGTGAAGGT CCATTCACAG 7080

CAGGTGTCAA CCATGTGATT CCATACGAAC TCTTCGCAGG TGATGGTATG TTGACTCGTC 7140

TCTTGCTCAA GGCATCTGAC AAGGCACCAT GGTCAGATAA CGGTGACGCT AAAAACCCAG 7200

CCCTATCTCC ACTAGGTGAA AACGTGAAGA CCAAAGGTCA ATACTTCTAT CAATTAGCCT 7260

TGGACGGAAA TGTAGCTGGC AAAGAAAAAC AAGCGCTCAT TGACCAGTTC CGAGCAAACG 7320

GTACTCAAAC TTACAGCGCT ACAGTCAATG TCTATGGTAA CAAAGACGGT AAACCAGACT 7380

TGGACAACAT CGTAGCAACT AAAAAAGTCA CTATTAACAT AAACGGTTTA ATTTCTAAAG 7440

AAACAGTTCA AAAAGCCGTT GCAGACAACG TTAAGGACAG TATCGATGTT CCAGCAGCCT 7500

ACCTAGAAAA GGCCAAGGGT GAAGGTCCAT TCACAGCAGG TGTCAACCAT GTGATTCCAT 7560

ACGAACTCTT CGCAGGTGAT GGCATGTTGA CTCGTCTCTT GCTCAAGGCA TCTGACAAGG 7620

CACCATGGTC AGATAACGGC GACGCTAAAA ACCCAGCTCT ATCTCCACTA GGTGAAAACG 7680

TGAAGACCAA AGGTCAATAC TTCTATCAAG TAGCCTTGGA CGGAAATGTA GCTGGCAAAG 7740

AAAAACAAGC GCTCATTGAC CAGTTCCGAG CAAACGGTAC TCAAACTTAC AGCGCTACAG 7800

TCAATGTCTA TGGTAACAAA GACGGTAAAC CAGACTTGGA CAACATCGTA GCAACTAAAA 7860

AAGTCACTAT TAAGATAAAT GTTAAAGAAA CATCAGACAC AGCAAATGGT TCATTATCAC 7920

CTTCTAACTC TGGTTCTGGC GTGACTCCGA TGAATCACAA TCATGCTACA GGTACTACAG 7980

ATAGCATGCC TGCTGACACC ATGACAAGTT CTACCAACAC GATGGCAGGT GAAAACATGG 8040

CTGCTTCTGC TAACAAGATG TCTGATACGA TGATGTCAGA GGATAAAGCT ATGCTACCAA 8100

ATACTGGTGA GACTCAAACA TCAATGGCAA GTATTGGTTT CCTTGGGCTT GCGCTTGCAG 8160

GTTTACTCGG TGGTCTAGGT TTGAAAAACA AAAAAGAAGA AAACTAATCA GCTAAGGAAA 8220

TAAATGATGG ATAGTGGGCT GACTAAGATT AGTTTAACAA CTCAATCAGC AATCAGGACT 8280

TTCTTTCAAT AGCAGATTAA AATCATCGTA AAACAATAAA AATAGTGTTA TACTTAAAGC 8340

AGTATAGCAC TGTTTTTATC AAAGGAGAGA CAGATGGGAA AGACAATTTT ACTCGTTGAC 8400

GACGAGGTAG AAATCACAGA TATTCATCAG AGATACTTAA TTCAGGCAGG TTATCAGGTC 8460

TTGGTAGCCC ATGATGGACT GGAAGCGCTA GAGCTGTTCA AGAAAAAACC GATTGATTTG 8520

ATTATCACAG ATGTCATGAT GCCTCGGATG GATGGTTATG ATTTAATCAG TGAGGTTCAA 8580

TACTTATCAC CAGAGCAGCC TTTCCTATTT ATTACTGCTA AGACCAGTGA ACAGGACAAG 8640

ATTTACGGCC TGAGCTTGGG AGCAGATGAT TTTATTGCTA AGCCTTTTAG CCCACGTGAG 8700

CTGGTTTTGC GTGTCCACAA TATTTTGCGC CGCCTTCATC GTGGGGGCGA AACAGAGCTG 8760

ATTTCCCTTG GCAATCTAAA AATGAATCAT AGTAGTCATG AAGTTCAAAT AGGAGAAGAA 8820

ATGCTGGATT TAACTGTTAA ATCATTTGAA TTGCTGTGGA TTTTAGCTAG TAATCCAGAG 8880

CGAGTTTTCT CCAAGACAGA CCTCTATGAA AAGATCTGGA AAGAAGACTA CGTGGATGAC 8940

ACCAATACCT TGAATGTGCA TATCCATGCT CTTCGACAGG AGCTGGCAAA ATATAGTAGT 9000

GACCAAACTC CCACTATTAA GACAGTTTGG GGGTTGGGAT ATAAGATAGA GAAACCGAGA 9060

GGACAAACAT GAAACTAAAA AGTTATATTT TGGTTGGATA TATTATTTCA ACCCTCTTAA 9120

CCATTTTGGT TGTTTTTTGG GCTGTTCAAA AAATGCTGAT TGCGAAAGGC GAGATTTACT 9180

TTTTGCTTGG GATGACCATC GTTGCCAGCC TTGTCGGTGC TGGGATTAGT CTCTTTCTCC 9240

TATTGCCAGT CTTTACGTCG TTGGGCAAAC TCAAGGAGCA TGCCAAGCGG GTAGCGGCCA 9300

AGGATTTTCC TTCAAATTTG GAGGTTCAAG GTCCTGTAGA ATTTCAGCAA TTAGGGCAAA 9360

CTTTTAATGA GATGTCCCAT GATTTGCAGG TAAGCTTTGA TTCCTTGGAA GAAAGCGAAC 9420

GAGAAAAGGG CTTGATGATT GCCCAGTTGT CGCATGATAT TAAGACTCCT ATCACTTCGA 9480

TCCAAGCGAC GGTAGAAGGG ATTTTGGATG GGATTATCAA GGAGTCGGAG CAAGCTCATT 9540

ATCTAGCAAC CATTGGACGC CAGACGGAGA GGCTCAATAA ACTGGTTGAG GAGTTGAATT 9600

TTTTGACCCT AAACACAGCT AGAAATCAGG TGGAAACTAC CAGTAAAGAC AGTATTTTTC 9660

TGGACAAGCT CTTAATTGAG TGCATGAGTG AATTTCAGTT TTTGATTGAG CAGGAGAGAA 9720

GAGATGTCCA CTTGCAGGTA ATCCCAGAGT CTGCCCGGAT TGAGGGAGAT TATGCTAAGC 9780

TTTCTCGTAT CTTGGTGAAT CTGGTCGATA ACGCTTTTAA ATATTCTGCT CCAGGAACCA 9840

AGCTGGAAGT GGTGGCTAAG CTGGAGAAGG ACCAGCTTTC AATCAGTGTG ACCGATGAAG 9900

GGCAGGGTAT TGCCCCAGAG GATTTGGAAA ATATTTTCAA ACGCCTTTAT CGTGTCGAAA 9960

CTTCGCGTAA CATGAAGACA GGTGGTCATG GATTAGGACT TGCGATTGCG CGTGAATTGG 10020

CCCATCAATT GGGTGGGGAA ATCACAGTCA GCAGCCAGTA CGGTCTAGGA AGTACCTTTA 10080

CCCTCGTTCT CAACCTCTCT GGTAGTGAAA ATAAAGCCTA AAACCCCTTT ACAAATCCAG 10140

CTATTCATGG TAGAATAGAT TTTGTGTGAA ATATCAGCAG GAAAGCATGA AGCTCGTCAA 10200

CAGGTGTCTT ATGACAAGTA ACCTTGGCTG TTTAGGCGAA GGGCATCTGC ACGG 10254

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9769 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

CCGGCGACTA TCGATAACAC TTGACTTGGT AGCCCCACAT TTTGGACAAC GCATCCTTTC 60

CCTCCTTATC GTTTTCTTTT CATTATACCA TTTTTTAAGC GATTCCCAAA ACAATTCTTC 120

TTTTTGCTTG ACAAGTTTTT TGTTTTGTTG TATTATTTAA TTAAGACAAC AAGGTAAAAG 180

AAAGGAGACT AAGATGTCCT GGACATTTGA CAACAAAAAA CCCATCTATT TACAGATTAT 240

GGAGAAAATC AAGCTTCAGA TTGTTTCCCA TACACTGGAA CCCAATCAAC AACTTCCAAC 300

CGTGAGGAGC TAGCTAGCGA GGCTGGTGTC AATCCCAATA CCATCCAAAG AGCCTTATCA 360

GACCTTGAAC GAGAAGGATT TGTCTACAGC AAGCGAACAA CTGGACGATT TGTGACTAAG 420

GATAAGGAGC TAATCGCCCA GTCACGCAAA CAATTATCAG AAGAAGAATT GGAACACTTC 480

GTTTCCTCCA TGACCCATTT TGGCTATGAA AAAGAAGAAC TACCAGGCGT AGTCAGTGAT 540

TATATTAAAG GAGTTTAAGC CTATGTCATT ACTAGTATTT GAAAATGTAT CCAAATCATA 600

TGGAGCAACA CCAGCCCTTG AAAATGTTTC TCTTGACATT CCAGCTGGAA AAATTGTCGG 660

CCTTCTTGGG CCAAACGGCT CAGGAAAAAC AACCCTGATT AAACTAATTA ATGGCCTCTT 720

ACAACCAGAT CAAGGACGTG TCCTCATCAA CGACATGGAC CCAAGCCCAG CAACCAAGGC 780

CGTTGTAGCT TATTTGCCTG ATACGACCTA TCTCAATGAG CAAATGAAGG TCAAAGAAGC 840

CCTAACCTAC TTCAAGACCT TCTATAAAGA TTGTCAGATC TTGAACGCGC CCATCATCTA 900

CTTGCAGACC TGGGCATTGA TGAAAATAGT CGTCTCAAGA AACTATCAAA AGGAAACAAA 960

GAAAAGGTTC AACTGATTTT GGTTATGAGC CGTGATGCTC GTCTCTATGT TTTGGACGAA 1020

CCCATTGGTG GGGTGGATCC AGCAGCCCGT GCTTATATCC TCAATACCAT TATCAACAAC 1080

TACTCACCAA CTTCTACCGT TTTGATTTCT ACCCACTTGA TTTCTGATAT CGAGCCAATC 1140

TTGGATGAAA TTGTCTTCCT AAAAGACGGA AAAGTCGTCC GTCAAGGAAA TGTAGATGAT 1200

ATTCGCTACG AGTCAGGTGA ATCCATTGAC CAACTCTTCC GTCAGaATTT AAGGCCTAAG 1260

CAAAGGAGAT TATTTATGTT TTGGAATTTA GTTCGCTACG AATTTAAAAA TGTTAACAAG 1320

TGGTATTTAG CCCTCTACGC AGCCGTGCTA GTCCTTTCTG CCCTCATCGG AATACAGACA 1380

CAAGGCTTTA AAAATCTACC TTACCAAGAA AGTCAGGCTA CTATGCTACT TTTTCTAGCT 1440

ACAGTCTTTG GTGGCTTGAT GCTTACACTT GGGATTTCAA CCATTTTCTT GATTATTAAA 1500

CGCTTCAAAG GTAGTGTCTA CGACCGACAA GGCTATCTGA CTTTGACCTT GCCAGTTTCT 1560

GAACACCATA TCATCACAGC CAAACTAATC GGTGCCTTTA TCTGGTCATT GATTAGCACC 1620

GCTGTATTGG CTCTAAGTGC TGTTATTATT CTGGCTTTAA CAGCTCCAGA ATGGATTCCT 1680

CTTTCTTATG TGATTACATT TGTAGAAACA CATCTCCCTC AGATCTTTCT TACAGGTATA 1740

TCCTTCCTAC TAAATACTAT TTCAGGAATC CTCTGCATCT ACCTGGCTAT TTCCATTGGA 1800

CAGCTTTTCA ATGAATACCG TACAGCACTC GCTGTTGCAG TCTACATTGG TATCCAAATC 1860

GTCATTGGAT TTATTGAACT TTTCTTCAAT CTTAGTTCTA ATTTCTATGT CAATTCACTG 1920

GTAGGACTCA ATGACCATTT CTATATGGGA GCAGGTATAG CCATTGTTGA AGAACTCATA 1980

TTCATAGCTA TCTTTTATCT CGGAACCTAC TACATCTTGA GAAATAAGGT TAATTTGCTT 2040

TAAATAATTT TTACCTAGAT ATGTAACATA CTCATAGAAC AAAAGAGACC AGGCAAAAAG 2100

TCTTTAAAAT TAGAAAACGC ATAGTATCAG GTGTTGAATA TGTACTGCcC CCCAAAAGTT 2160

AGATTTTTTC TGTCTAACTT TTGGGGGCAG TTCATAAGAA CCTTGGTAAT ATGCGTTTTT 2220

TGTGAGCTGA CTTATTTCCT TTCACTATAT CGCAAAATGA AATAAGAACG GAACGATGGG 2280

ATTTTGGAAT TCAAATCAAT TTATAAGAAT GTTTTAGAAG TAATATTATC CTATTCCAGA 2340

TTCAGTTCAC TATACAATTG AGTTTTCAAG CAACCTGTTT ACATAATGTG TACATAATTA 2400

GGTTCGTGAT TCCACCCTTT TCACCTTTAA AAACCTCGCT TTCGCAAGGC TCTTCTATTT 2460

ATAAGATAAG GCACGTTTAA AGGTTTTCCA AATCCCTAAA TCATCCGTTT GAAGAACGAG 2520

ACTAGCATAC ATGCGTCCGA TAAATCCTGT TGCTACCACC GCAAAAATCA CTGTAATAGC 2580

AAGTGAAATC CATGCTTCTG CTCCCCCCGC ATAGTCATTA ATCGTTCGAA ACGGCATAAA 2640

GAAGGTCGAA ATAAAGGGAA TATAAGAACC AATCTTCAAG AGGAGATTGT CACCAGCTGC 2700

ACCTAGAGCT GTCACTCCAA AAAAACCACC CATAATCAAA ATCATCAAAG GCGACAAGGC 2760

TTTCCCTGAG TCCTCAGGAC GAGAAACCAT AGATCCTAGG AAGGCTGCCA AGACTACGTA 2820

CATGAAAAGA CTGATCAAAA TAAAGAGCAA GGTATTCAGT GAGATAGCAT CTCCCAAGTG 2880

ATCCAAAATA CCAGACTGAG CCAAGAATGG CAAATCTTTA AAGAGCAAAA CGGCAGCCAG 2940

ACCACCTACA ACATAGATCC CAATATGCGT TAAAATCACT AGAAACAGAG CCATCATCCG 3000

CGCATAGAAA TAGTGACTTG CCCTTATGCT AGAAAAAACG ACTTCCATAA TTTTGGTGCC 3060

TTTTTCACTG GCAACTTCCT GAGCTGTTAC ACCCGCATAG GTAATCAGAA TCATATAAAG 3120

AAAGAATCCT AAGGCACCTG CTGCAATTGT TTGAATAAAC TTTTTATTTT CCTTGGCTTC 3180

ATCAATCTTT TCTGTGAATT GAATTGTCTG CGCTAAGCGT TTTTCCTGCT CTTGAGACAA 3240

GGAAGCAGTT GAACGATTAA GCTGATTTTG CAGTTCATTG AGTGTACCTG TAACCTCAAA 3300

TTTAATTCCA TTTTCAAGCG ATGTTTCGCC ATGATAAACT GCCTTTAGAA CACTATCTTC 3360

TTGATCAATG GTCAAATAAC CTTTTAATTT TTCTTCTTTA ATTGCTTCTT TGGCACTTGC 3420

TTCGTCTTTA TAGTCGAAGT TAACACCATT TACATTCTTC AGTCCTTCTG CTACAGATGG 3480

CACTGTTGTC ACTACTGCCA CTTTATTATT TTTAGCCATA GAAGAACCTT GGAGATGCCC 3540

AATTCCTACA GAGATTCCTA AAAAGAGGAA CGGCGAAATC ACCATAAAGA AGAAACTCCA 3600

TGACTCGACA TGTCGAAGAT AGGTTTCCTT GATTACAACC CACATATTTC TCATACTTCC 3660

ACTCCTGATT CTAGTTTAAA GATTTCATCG ATAGTTGGCG CTTGTTGGTC AAATGTTGCG 3720

ATATATTGAC CTTGAGTCAA GATTGAGAAG AGTTCCCTTC CAGCGCTCTC ATCCTCCAAA 3780

ATCAATTTCC AACTGCCTTG TTTGGTCAAG CTCACCTGTT TGACATGAGG AAGATTTTCC 3840

AATTCTTCCT TGCTTCGTTC ACTTGAAACA AAGAGACGCG TTTTCCCGTA TTGATTGCGG 3900

ACATCCTGAA CTGGTCCGTG CAAGACCACA CGGCCATCTC GGATCATCAG AATATCGTCA 3960

CAAAGTTCCT CAACATTGGT CATGACATGG TCAGAAAAGA TAATGGTTGT CCGCGCTCTT 4020

TTTCCTGAAA AATGACTTGT TTGAGCAATT CTGTATTAAC TGGGTCCAAT CCACTAAAAG 4080

GCTCATCCAA GATAATCAGG TCTGGTTCAT GAATCAGAGT AATAATGAGC TGAATCTTCT 4140

GCTGATTTCC TTTTGACAGA CTCTTGATTT TATCTGTCAG CTTTCCTTTC ACTTCCAACC 4200

TCTTCATCCA TTGAGGGAGT TTTTCTTTGA CTTCTTTGGC ATCCATGCCT TTTAGAGTCG 4260

CCAAGTAGCG AACTTGTTCA AGAACTGTCA ATTTAGGCAT GAGATGCGTT CTTCAGGCAG 4320

ATAACCAATC CGAGCATAGG TCTCCTGACG AATATCCTGA CCATCCAGAC CGATTTCTCC 4380

CTGATATTCT AGGAATTTCA AAATACTATG GAAAATCGTT GTTTTTCCAG CACCATTTTT 4440

TCCGACTAGT CCCAAAATAC GACCTGGTCG CGCTTGAAAG TCAATACCAA ACAAAACTTG 4500

CTTGGATCCA AAACTTTTCT CTAGACTTCT TACTTCTAGC ATCTTTCACC TCCGAAATTT 4560

CTTGCACTCA TTATACTCCT TTTTGATAGC CTTTACAATG TTTTTTGTCC ATTTTTAGAA 4620

GACTATTGCT GTGTAAAATA TGGCCTGGAG CACTTTTATA CTCAATGAAA ATCAAAGAGC 4680

AAACTAGGAA GCTAGCCGTA GACTGCTCAA AGTACAGCTT TGAGGTTGCA GATAAAACTG 4740

ACGAAGTCgA CTCAAAACAC TGTTTTGAGG TTGTGGATAG AACTGACGAA kCrTAaCTAT 4800

ATCTACGGCA AGGCGAAcTG ACGTGGTTTG AAGAGATTTT CGAAGAGTAT TAGTGATAAA 4860

TCCATTATAC AGCAGCAAAC TTAATTTATA CCTTCCGCTC CTCAACTGTC TATTTTTAAT 4920

CCTGAATTGT TATTTGAGTA ACTCCTTTTT CCTCGTAAAG TTTTCTTCCT CTAAAACTTC 4980

TGGAAAAAGG CTAATAGTTT CAGACAACAT TTTTATAAGA AACAAGTTCA TCTGTCATTT 5040

CAAGAAGGAG TAATCCTTTA TCTACTAATG GACGGAACAG AATTCAACCG CTTGTCCGAT 5100

ATGTTTTCTA AGGATTATAT AGTAAAATGA AATAAGAACA GGACAAATTG ATCAGGACAG 5160

TCAAATTGAT TTCTAACAAT GTTTTAGAAG TAGATGTATA CTATTCTAGT TTCAATCTGC 5220

TATATCTATT ATGCACACCC CTATAGGATC TAATGAAAAT CACAACAGGC TCATTCATAG 5280

ATGGTTACCT AAGCCTAAGG GAACTAAGAA AACGACTACC AAGGAAGTCG CATTCATCGA 5340

AAAGTAGATT AACAACTATC CTAAAAAATG CTTGAACTAC AAGTCCCCCA GAGAAGACTT 5400

CTGGATGACT AACTTGAACT TGAAATTTAG CAATAATTAA TTCACTATCT AACTATATTT 5460

AGTAATTATT TCAGAACTGA TTAATATTAA AATTAACTAA CAATTCAAAG GATTCATACT 5520

AGCCATAAAT TACGTCCATC AGAGAGAGAC TCTTACTACT TTTAGATTTT AGTCTTTCTA 5580

GCTTCAGAAT ACATCTAAAC TTTAGGGAAA ATGACTATTC GAAAGCGCGA ATGCCTCAAA 5640

ATTATCTCAG ATAAGCTATT CGAAACTTAG AATGCTTTTA AATTTATGGA ATTGCGATTA 5700

TTCGAAACCT AGAATGCATA TAACCTTTAG TTGACAGACC TATTCTAAGT CTCGAAGGGC 5760

TATTTACTTT CTATTCCTTA TCAAAAAAGA CTCATTCCCC CTTTCTCCTC CAAAATATGG 5820

TATAGTAGAA ATATACTATC TATGAGGAGT TTACATGTCA CAGGATAAAC AAATGAAAGC 5880

TGTTTCTCCC CTTCTGCAGC GAGTTATCAA TATCTCATCG ATTGTCGGTG GGGTTGGGAG 5940

TTTGATTTTC TGTATTTGGG CTTATCAGGC TGGGATTTTA CAATCCAAGG AAACCCTCTC 6000

TGCCTTTATC CAGCAGGCAG GCATCTGGGG TCCACCTCTC TTTATCTTTT TACAGATTTT 6060

ACAGACTGTC GTCCCTATCA TTCCAGGGGC CTTGACCTCG GTGGCTGGGG TCTTTATCTA 6120

CGGGCACATC ATCGGGACTA TCTACAACTA TATCGGCATC GTGATTGGCT GTGCCATTAT 6180

CTTTTATCTA GTGCGCCTAT ACGGAGCTGC CTTTGTCCAG TCTGTCGTCA GCAAGCGCAC 6240

CTACGACAAG TACATCGACT GGCTAGATAA GGGCAATCGT TTTGACCGCT TCTTTATTTT 6300

TATGATGATT TGGCCCATTA GCCCAGCTGA CTTTCTCTGT ATGCTGGCTG CCCTGACCAA 6360

GATGAGCTTC AAGCGCTACA TGACCATCAT CATTCTGACC AAACCCTTTA CCCTCGTGGT 6420

TTATACCTAC GGTCTGACCT ATATTATTGA CTTTTTCTGG CAAATGCTTT GACACGTAAA 6480

AAATCCGTTT GGTTTCCCAA GTGGATTTTT AAAGCGTAGA TTAACTATAG CTTGATACTA 6540

AATATACTTT GGTATGGAAA TCATGCATAT TTTTCGATAG TGAGGCGAGG ACTTACCTAG 6600

CCTTTCCGCC GTGATAGAAA CACCTGAAAT CTAATGGTTT CAGGTATTCG GAAACTTTGA 6660

GCCTAGTGTC TCAAAGTTTA GGTATGGAAT TTTGAAGAAA GTCGCTACCG TCCGTAATCA 6720

CTTAAGGAAA GGCTCAAAAA TATTGTTTTC AACCACAAAA TCCGTTTGGT TTCCCAAGCG 6780

GATTTTGTGC TTTATTTTGA AACTTCTTTT GCAAGAACAA AGTTCCCAAG TGTGGCAGAA 6840

CCATTTCCTG CGACTGCTGG CGTCACGATA TAGTCACGCA CATCTGGTAC TGGTAGGTAA 6900

CCATTAAGAA GAGATGTAAA TTTCTCACGG ACACGGTCCA GCATATGTTG TTGAGCCATG 6960

ACCCCTCCAC CAAAGACAAT CACGTCTGGG CGGAAAGTCA CTGTCGCATT AACCGCAGCT 7020

TGAGCGATAT AGTAGGCTTG AACATCCCAA ACAGGGTTGT TGAGTTCAAT AGTTTCCCCA 7080

CGTACACCTG TACGAGCTTC CAAACTTGGA CCAGCTGCAT AACCTTCTAG ACATCCCTTA 7140

TGGAAAGGAC AAACACCCTT AAACTCTTTT TCAATATCCA TTGGGTGTCT AGCAACATAA 7200

TAATGACCCA TTTCAGGGTG ACCCACACCA CCGATAAACT CACCACGTTG GATGACGCCT 7260

GCACCGATAC CTGTACCGAT TGTGTAGTAA ACCAAGTTTT CGATACGACC ACCAGCATTG 7320

TTACGGGCAA CCATTTCACC GTAAGCAGAG CTGTTTACGT CTGTTGTGAA GTACATTGGC 7380

ACGTTTAGGG CGCGACGAAG GGCACCAAGC AAGTCTACAT TTGCCCAGTT TGGTTTTGGA 7440

GTCGTCGTGA TAAAGCCATA AGTTTTTGAG TTTTTGTCAA TATCAATCGG CCCAAATGAA 7500

CCAACTGCAA GACCAGCAAG GTTATCGAAT TTTGAGAAGA ACTCAATGGT TTTATCGATT 7560

GTTTCGATTG GAGTTGTTGT TGGAAATTGT GTTTTTTCTA CAACGTTAAA GTTTTCATCA 7620

CCGACAGCAC AGACAAACTT TGTACCGCCC GCTTCCAAGC TTCCATATAA TTTTGTCATG 7680

ATAAACCTCT TGTTTTTATT TTCTTTATTA TAGCATACTT CGAAAGTCTA AATGTCTCTA 7740

TTTTTTAGAT TTTCCTCTGT AAATCTTACT ATCTAATAAA AACGAACAAA CATGTCATTT 7800

GTTCGTTTTC ACATTAGAGA GGATTGATTA GATTTTCACT TCGATCACAG CATCCCCCTT 7860

AGCAACTGAA CCTGTTGCGA CTGGAGCTAC TGAAGCGTAG TCACCTGTAT TTGTAACGAT 7920

AACCATTGTT GTATCATCAA GTCCAGCTGC AGCGATTTTG TTTGAGTCAA ATGTTCCAAG 7980

AACATCGCCA GCTTTCACCT TATTACCTTG AGCAACTTTT GTTTCAAAAC CGTCACCGTT 8040

CATAGATACA GTATCAATAC CAACATGAAT CAAAACTTCA GCACCATTTC TTGTTTTCAA 8100

ACCAAAAGCG TGCCCTGTTG GAAAGGCAAT TGAAACTTCA GCATCAGCTG GTGCATAGAC 8160

CACGCCTTGG CTTGGTTTCA CAACGATACC TTGTCCCATA GCTCCACTTG AGAAGACTGG 8220

GTCATTGACA TCAGCAAGAG CGACAACATC ACCGACGATA GGAGTTACAA GTGTTTCATT 8280

TTGAAGAGCT GCTGGCGCAA CTTCTTCTTT TTCTTCAGCC ACTTCAGCTC GTTTTGCAGC 8340

TGCAGTTGCG TCTACTTCAT CTTCGTAACC AAACATGTAA GTAAGAGCAA AACCAAGGGC 8400

AAATGATACA GCTACCATAA GAAGGTATTG TGGAAGTTGT CCGTTACCAA CATAAAGCAT 8460

TGTACCAGGG ATGATGGTGA TACCATTACC AGTACCAGCA AGTCCAAGGA TAGAAGCCAA 8520

TCCACCACCG ATTGCACCAG CAATCAATGA AAGGAAGAAT GGTTTACGGA AGCGCAAGTT 8580

CACCCCGAAG ATAGCAGGCT CTGTAATACC TAGGAAGGCA GAAAGAGCAG CCGGGAAAGC 8640

AAGTGTTTTC AGTTTTGGAT TTTTTGTTTT AACACCAACC GCAACAGTAG CAGCACCTTG 8700

AGCTGTCATA GCAGCTGTGA TGATAGCGTT GAATGGGTTA GCATGGTCAG CAGCAAGTAA 8760

TTGCACTTCA AGCAAGTTGA AGATGTGGTG CACACCTGAC ACGACGATCA ATTGGTGAAC 8820

CCCACCAATC AAGAAACCAC CAAGACCAAA TGGCATGCTA AGAATCGCTT TTGTAGCAAT 8880

AAGGATGTAG TTTTCAACAA CGTGGAAAAC TGGTCCAATG ACAAAGAGTC CAAGGATAGA 8940

CATGACCAAA AGTGTCACGA ATGGTGTTAC CAAGAGGTCA ATGACATCTG GAACAACTTG 9000

CGGACAGCTT TTTCAAATTT AGCTCCGACA ACCCCGATGA TGAAGGCTGG AAGAACGGAA 9060

CCTTGCAAAC CAACAACAGG GATGAAACCA AAGAAGTTCA TCGCTGTTAC TTCACCACCT 9120

TGAGCAACTG CCCAAGCGTT TGGAAGTGAG CCAGAGACAA GCATCATACC AAGAACGATA 9180

CCAACGGCAG GATTTCCACC AAATACACGG AAGGTTGACC ACACAACCAA ACCTGGCAAG 9240

ATGATGAAGG CTGTATCTGT CAAGATTTGT GTGTAAGTTG CAAAGTCACC TGGAAGTGGC 9300

ATTTCAAGAG CGTTGAAAAG ACCACGCACA CCCATGAAGA GACCTGTCGC TACGATAACT 9360

GGGATGATTG GAACGAAAAC ATCACCAAAA GTACGGATAG CACGTTGGAA CCAGTTCCCT 9420

TGTTTAGCAA CTTCTGCTTT CATGTCATCC TTAGATGATG TTGGTAATCC AAGTACAACA 9480

ACTTCATCGT ACATTTTGTT AACTGTACCT GTACCAAAGA TAATTTGGTA TTGCCCTGAG 9540

TTAAAGAAAG CACCTTGAAC TTTTTCCAAG TTCTCAATCA CTTCTTTATT GATTTTCTCT 9600

TCATCTTTGA CCATGACACG TAGACGAGTC GCACAGTGGG CAACACTATT GACATTTTCA 9660

CGTCCGCCCA AGGCATCGAT GACTTTTTTT GCAATTTCCT GATTGTTCAT TTGCAAAAAT 9720

CTCCTTATAT AACATTTTGT TCTTGTTTGA AAGCGATTTT ATTCGCCGG 9769

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3149 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

CGCTTGAGTG CTAATTCATA GTTCTATTGT ATCACTTGGT CAGAAATAAT CAAGAAAAAA 60

GTCTGACTTT CTCAAGATAA AAAGCCTGAG ACCAACTCAG ACTTTTTAAT TCTTAAAATG 120

GCAATTCTTC CTCTTCCAAG ACCAAATCTG CCAAATCTTG GCCTGCATTA TTTTCACGCA 180

TAGCACGTTG GGCACGACTT TCCAAGAGTT GGAATCCTGT GACAAGTACT TCGGTCACGT 240

AGTTCATTTG GCCATTTTTC TCAAAGCGAC GGGTACGCAA TTCTCCATCA ACGGAAATGA 300

GACTACCTTT GGTTGCGTAC TTGCCAAAGT TTCTGCTAGT CTGCCCCATA GGACCATATT 360

GACAAAATCA GCTTCACGTT CACCGTTTTG GTCTTTGTAA CGACGGTTCA CAGCGATAGT 420

TGCTCGCGCT ACCGACTTGT CATTGTTGGT TTTGTGCAAT TCTGGTGTAG ACGTTAAACG 480

TCCAATCAAG ATAACTTTAT TATACATATT TTCTTCCTCC TACTTATCTA TTCGTAGGAA 540

ATCAAAAAAA GTTACAGAAA TTTGTAACTT TTCGAGAAAA TTTTTTATTT TTTATGAACC 600

ATGAAACCTG TCGCCTGTTG ATTGGCCATA ATGGTCATAT CTGTAATCTG AACACGACGA 660

GGTTGACTAG TCACATAGAC TACTGTATCT GCAATATCCT GAGCTTGCAA AGCTTCTATT 720

CCTTGGTAAA CGGACGCAGC TCGTTCTTTA TCACCATGAA AACGCACTGT AGAAAAATCT 780

GTTTCGACAA TTCCAGGCTG AATGGTCGTC ACCTTGATAT CCGTTGCGAT GGTATCAATT 840

CGCAGTCCAT CTGAAAAGGT CTTAACTGCC GCCTTGGTGG CTGAGTAAAC AGCTGCACCA 900

GCATAGGCAT AAATTCCTGC GGTTGACCCC ATATTGATAA TATGACCTTG ATTGGCTTTT 960

ACCATTGCTG GCAAGAAACA GCGAGTGACT GCCATCAAAC CTTTGACATT GGTATCCAAC 1020

ATGGTCAGCA TATCCAACTC TTCATAGTCT TGATAGGGAG CTAAGCCAAG AGCCAGTCCT 1080

GCGTTATTGA CCAGGATGTC AATCTGACCT ATCGTTTCTA AAATATCAGA GCAGACAGTC 1140

TTTACCATTG TCATATCCGT GACATCTAGG AGAAAAGTCC AAACTGTTTG ATTTGGAAAA 1200

GTTTCTGCAA ACTCCGCCTT AAGAGCTTCT AGTCTGTCTA TCCGTCGTCC TGTTAGAACG 1260

ACATCCTCAC CCTGCTCCAG ATAAGCACGC GCAATCGCTT CACCGATTCC TGATGTCGCT 1320

CCTGTAATCA CAACATTTTT TGCCATCTTA TTTCCTTCTA GCTGGTCTAT CAGATATTAA 1380

CAACTTCTTA GGCAGTCCAG TGTTTCGCTG GGTCGAACGG TGTTCCGACA ACTTGGTCTT 1440

CTGATAATTC AAGCACCCCA CGTTTTTGTG GAGCATTTGG CAGATGCAAT TCACGAGGAC 1500

TGCACATCAT ACCAAAACTC TTTTCACCAC GAAGTTCACC TGGGAAAATG AGATTCCCTT 1560

TTGGCATCAT AGCTCCAGGA AGCGCGACAA TGGTTTTCAA CCCCACACGC GCATTGGGAG 1620

CTCCTGCAAC GATTTGTACA GTCTTATCAC TTGCGACTGC AACTTGGCAG ATGTTGAGGT 1680

GGTCACTATC TGGATGGGCT ACCATCTCAA CAATTTCACC TACAACAAAC TTAGGTTCCT 1740

TATCATTAAC AATTTCTTCT GTAAAACCTT CCGCCTGCAA CTCTTGGTTC AAACGAGCGA 1800

CTTGCTCATC TGTCAAAAAG ACTTGACCGC GCTCTGCAAT TTCAAATAAA CTTGAAACTT 1860

CGAAAATATT CCAAGCCACT GTTTCCCCAT TATCTTTGAG AAAAACACGG GCTACCTTGC 1920

CTTTGCGCTC CACATCCAGT TTGGCATCTC CGCTATTTTT CACGATGACC ATAAGGACAT 1980

CACCGACATG TTCTTTATTA TATGTAAAAA TCATTGTTTC CTTTTTCTCC TATTTCAGTC 2040

CTGCTAAAAA GTCATTGATT TGTTGCTTGC TTTTACGGTC GCGATTGACA AAACGACCGA 2100

TTTCCTTGTC CTTTTCTAGA ACAACAAGGC TAGGAATTCC GTAAACATCC CAGAGTTTGG 2160

CCAAATCCAT ATACTGATCT CGGTCCATTC GAATAAAGGT GAACTCTGGA TTGGTCTCCT 2220

CAATCTCTGG TAAGGCAGGA TAAATATAAC GACAATCGCT ACACCAGTCT GCCACAAAAA 2280

TGAAGACCTT CTTGCCCGCT TTTTCCACTA AAGATGCTAA TTCTTCTAAA CTTGCTGGCT 2340

GTATCATAAG ACTTCCTCCT CATAGACTAG GTCTTCATTT TCATAGACAA AGGTATAATG 2400

ACGGCCATCC TCAAAAATGA CGCCACCAAC CAAGCTCTCC AGACTGCTTT CGTAAACTTG 2460

AACATAAAGG GTCGCAATTT CCCCCATGTC GGAAAAATGG TCTCGCACAA TCTCTGTCAA 2520

CTCTTCCTGA GTCTTCATGA GCTTACGGTC ATCTGCAACT TTTTTCGTAG CAAGAGCAAG 2580

GCTTCCGATA CCTAGCAGAG CCAAGCCTGC CATCCACATT TTTTTAGCTT TCATACCATT 2640

CATTTTAACA CAAAAAAGGC TTCAGGACAA ATGAGGAAGC AGCAGAAAAG CAAGTAAAAA 2700

GCCTCTTCCT TTAAGGAAAA GGACTTCTTA TACTCAATGA AAATCAAAGA CCAAACTAGG 2760

AAGCTAGCCG CAGGCTGCTC AAAGCACTGC TTTGAGGTTG TAGATAGAAC TGACGAgTCa 2820

CTCAAAACAC TGTTTTGAGG TTGTGGATGA AGCTGACGTG GTTTGAAGAG ATTTTCGAAG 2880

AGTATTATTC TTATTGCCAG GCACCTAAGT TGCCAACGTA GTAACTATCA GGTGTGTAGG 2940

TATTGCGAGC ATCTTACCTG ATGAAGCCAG ATAATACTAC TTGCCATTGT CTTTGACCCA 3000

ATCATTCGCA ATCATGGAAC CAGAAGAACT TACATAATAC CATTCTCCCT TGTCATAAAC 3060

CCAAGTACTG ACTTTCATGG TTCCTGAGCA ATTAAAGGCA AAAAAACTGT CCAATAACAT 3120

TCGTTTTTTA AAAGCATTTG ACACTACAT 3149

(2) INFORMATION FOR SEQ ID NO: 32:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10240 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

CCAAAAATTC AACCTTTAAG GGGAGTCCAG AGAGACTCAC AAGGTGTCAG ATAAAAGAAT 60

GGTGCAATTT TCTAGAGGAG ACTTTTTGAG TGTGCTCTCT TGTGTTGTAC GATTTTAACT 120

GAGGCCTTGC ACTAGCAAGG TCTTTTCTTT ATCTGGTCCC CTTAAAATTT AAGGAGGAAA 180

AGTTATGAAT CCCACATGTA AGAAGCGTTT GGGTGTCATT CGGTTGGAAA CCATGAAGGT 240

GGTTGCACAA GAGGAAATCG CGCCACAATC TTTGAATTAG TCCTAGAAGG AGAAATGGTT 300

GAAGCCATGC GAGCAGGCCA ATTTCTTCAT CTGCGTGTAC CGGACGATGC CCATCTCTTA 360

CGTCGTCCTA TTTCAATTTC GTCTATTGAC AAGGCAAACA AGCAGTGTCA CCTCATTTAT 420

CGGATTGACG GAGCTGGGAC TGCAATTTTT TCAACCTTAA GTCAGGGAGA CACTCTTGAT 480

GTGATGGGGC CTCAGGGAAA TGGTTTTGAC TTGTCTGACC TTGATGAGCA GAATCAGGTT 540

CTCCTTGTTG GTGGTGGGAT TGGTGTTCCA CCCTTGCTTG AGGTGGCCAA GGAATTGCAT 600

GAACGTGGAG TGAAAGTAGT GACAGTCCTC GGTTTTGCTA ATAAGGATGC TGTTATTTTG 660

AAAACGGAAT TGGCTCAGTA TGGTCAGGTC TTTGTAACGA CAGATGATGG TTCTTATGGC 720

ATCAAGGGAA ATGTTTCCGT TGTTATCAAT GATTTAGACA GTCAGTTTGA TGCTGTTTAC 780

TCGTGTGGGG CTCCAGGAAT GATGAAGTAT ATCAATCAAA CCTTTGATGA TCACCCAAGA 840

GCCTATTTAT CTCTGGAATC TCGTATGGCT TGTGGGATGG GAGCTTGCTA TGCCTGTGTT 900

CTAAAAGTAC CAGAAAACGA GACGGTCAGC CAACGCGTCT GTGAAGATGG TCCTGTTTTC 960

CGCACAGGAA CAGTTGTATT ATAAGGAGAA AATTATGACT ACAAATCGAT TACAAGTTTC 1020

TCTACCTGGT TTGGATTTGA AAAATCCGAT TATTCCAGCA TCAGGCTGTT TTGGCTTTGG 1080

ACAAGAGTAT GCCAAGTACT ATGATTTAGA CCTTTTAGGT TCTATTATGA TCAAGGCGAC 1140

AACCCTTGAA CCACGTTTTG GGAATCCAAC TCCAAGAGTG GCAGAGACGC CTGCTGGTAT 1200

GCTCAATGCA ATTGGCTTGC AAAATCCTGG TTTAGAGGTT GTTTTGGCTG AAAAGCTACC 1260

TTGGCTGGAA AGAGAATATC CAAATCTTCC TATTATTGCC AATGTAGCTG GTTTTTCAAA 1320

ACAAGAGTAT GCAGCTGTTT CTCATGGGAT TTCCAAGGCA ACTAATGTAA AAGCTATCGA 1380

GCTCAATATT TCTTGTCCCA ATGTTGACCA CTGTAATCAT GGACTTTTGA TTGGTCAAGA 1440

TCCAGATTTG GCTTATGATG TGGTGAAAGC AGCTGTGGAA GCCTCAGAAG TGCCAGTTTA 1500

TGTCAAATTA ACCCCGAGTG TGACCGATAT CGTTACTGTC GCAAAAGCTG CAGAAGATGC 1560

GGGAGCAAGT GGCTTGACCA TGATCAATAC TCTGGTTGGA ATGCGCTTTG ACCTCAAAAC 1620

TAGAAAACCA ATCTTGGCCA ATGGAACAGG TGGAATGTCT GGTCCAGCAG TCTTTCCAGT 1680

AGCCCTCAAA CTCATCCGCC AAGTTGCCCA AACAACAGAC CTGCCTATCA TTGGAATGGG 1740

AGGAGTGGAT TCGGCTGAAG CTGCCCTAGA AATGTATCTG GCTGGGGCAT CTGCTATCGG 1800

AGTTGGAACA GCTAACTTTA CCAATCCTTA TGCCTGCCCT GACATCATCG AAAATTTACC 1860

AAAAGTCATG GATAAATACG GTATTAGCAG TCTGGAAGAA CTCCGTCAGG AAGTAAAAGA 1920

GTCTCTGAGG TAAACTGCAA TCAATCTGTT CTTGATTTTT TATTAGTTTG TAATATGAAT 1980

TTAGGAGAAT TTTGGTACAA TAAAATAAAT AAGAACAGAG GAAGAAGGTT AATGAAGAAA 2040

GTAAGATTTA TTTTTTTAGC TCTGCTATTT TTCTTAGCTA GTCCAGAGGG TGCAATGGCT 2100

AGTGATGGTA CTTGGCAAGG AAAACAGTAT CTGAAAGAAG ATGGCAGTCA AGCAGCAAAT 2160

GAGTGGGTTT TTGATACTCA TTATCAATCT TGGTTCTATA TAAAAGCAGA TGCTAACTAT 2220

GCTGAAAATG AATGGCTAAA GCAAGGTGAC GACTATTTTT ACCTCAAATC TGGTGGCTAT 2280

ATGGCCAAAT CAGAATGGGT AGAAGACAAG GGAGCCTTTT ATTATCTTGA CCAAGATGGA 2340

AAGATGAAAA GAAATGCTTG GGTAGGAACT TCCTATGTTG GTGCAACAGG TGCCAAAGTA 2400

ATAGAAGACT GGGTCTATGA TTCTCAATAC GATGCTTGGT TTTATATCAA AGCAGATGGA 2460

CAGCACGCAG AGAAAGAATG GCTCCAAATT AAAGGGAAGG ACTATTATTT CAAATCCGGT 2520

GGTTATCTAC TGACAAGTCA GTGGATTAAT CAAGCTTATG TGAATGCTAG TGGTGCCAAA 2580

GTACAGCAAG GTTGGCTTTT TGACAAACAA TACCAATCTT GGTTTTACAT CAAAGAAAAT 2640

GGAAACTATG CTGATAAAGA ATGGATTTTC GAGAATGGTC ACTATTATTA TCTAAAATCC 2700

GGTGGyTACA TGGCAGCCAA TGAATGGATT TGGGATAAGG AATCTTGGTT TTATCTCAAA 2760

TyTGATGGGA AAATrGCTGA AAAAGAATGG GTCTACGATT CTCATAGTCA AGCTTGGTAC 2820

TACTTCAAAT CCGGTGGTTA CATGACAGCC AATGAATGGA TTTGGGATAA GGAATCTTGG 2880

TTTTACCTCA AATCTGATGG GAAAATAGCT GAAAAAGAAT GGGTCTACGA TTCTCATAGT 2940

CAAGCTTGGT ACTACTTCAA ATCTGGTGGC TACATGGCGA AAAATGAGAC AGTAGATGGT 3000

TATCAGCTTG GAAGCGATGG TAAATGGCTT GGAGGAAAAA CTACAAATGA AAATGCTGCT 3060

TACTATCAAG TAGTGCCTGT TACAGCCAAT GTTTATGATT CAGATGGTGA AAAGCTTTCC 3120

TATATATCGC AAGGTAGTGT CGTATGGCTA GATAAGGATA GAAAAAGTGA TGACAAGCGC 3180

TTGGCTATTA CTATTTCTGG TTTGTCAGGC TATATGAAAA CAGAAGATTT ACAAGCGCTA 3240

GATGCTAGTA AGGACTTTAT CCCTTATTAT GAGAGTGATG GCCACCGTTT TTATCACTAT 3300

GTGGCTCAGA ATGCTAGTAT CCCAGTAGCT TCTCATCTTT CTGATATGGA AGTAGGCAAG 3360

AAATATTATT CGGCAGATGG CCTGCATTTT GATGGTTTTA AGCTTGAGAA TCCCTTCCTT 3420

TTCAAAGATT TAACAGAGGC TACAAACTAC AGTGCTGAAG AATTGGATAA GGTATTTAGT 3480

TTGCTAAACA TTAACAATAG CCTTTTGGAG AACAAGGGCG CTACTTTTAA GGAAGCCGAA 3540

GAACATTACC ATATCAATGC TCTTTATCTC CTTGCCCATA GTGCCCTAGA AAGTAACTGG 3600

GGAAGAAGTA AAATTGCCAA AGATAAGAAT AATTTCTTTG GCATTACAGC CTATGATACG 3660

ACCCCTTACC TTTCTGCTAA GACATTTGAT GATGTGGATA AGGGAATTTT AGGTGCAACC 3720

AAGTGGATTA AGGAAAATTA TATCGATAGG GGAAGAACTT TCCTTGGAAA CAAGGCTTCT 3780

GGTATGAATG TGGAATATGC TTCAGACCCT TATTGGGGCG AAAAAATTGC TAGTGTGATG 3840

ATGAAAATCA ATGAGAAGCT AGGTGGCAAA GATTAGTACT ATAAGTGAAT ATGATTTGAG 3900

TGAATAGTAA GTTAAAAATC CTGATTTCAA GTAAAATCAG GATTTTTTCA TGGATGCAAT 3960

TTTTTTGGAG TCTGGTGTGA CGCGGAGGGT CTTTTGTCCT GTGTAAGTGA CAAAGCCGGG 4020

TTTTCCACCA GTTGGTTTAT TGAGTTTTTT GACTTCAATC ATATCTACCT GCACCAGATT 4080

CGACAGGCGC CCTTGAGAGA AGTAGGCAGC TAACTCTGCT GCGTCTGTCT TGACTGCATC 4140

AGATGGGTCA AGATTTCCTG AGATGACAAC ATGGCTTCCA GGAATGTCCT TAGCATGGAA 4200

CCAAAGTTCC TCCTTGCGGG CCATTTTAAA GGTCAATTCC TCATTTTGAA GATTGTTTCG 4260

TCCGACATAG ATGATGGTTT TGCCATCGCT TGCTAGATAT TGTTCTAGTT TTTTGCGTTT 4320

CTGGATTTTC TCCCGTTGTC TTCTGCGGAT AAAACCTGTT TGAATCAATT CTTCACGGAT 4380

TTCAGCGATT TCTTCCAGTC CAGCTTGGTT GAGGACGGTT TCTACACTTT CCAGATAGAG 4440

AATAGTGGCT TTGGTTTCTT CAATCAAATC AGTCAAGTAT TTGACAGCTT CTTTGAGTTT 4500

CTGATACCGT TTAAAATAGC GTTGGGCATT CTGGTTGGGA GTCAGAGCCT TATCAAGCGC 4560

AATCATGATA GGTTGGTTGG TATAGTAGTT GTCTAGGATA ACCTGGTCTT GGTCGTTAGG 4620

CACTTGGTGG AGGAAGGTTG TCAGCAATTC TCCTTTTTGA CGAAATTCTT CAGCGTTGTC 4680

TGTCGCCAGT AACTCTTTTT CCTGTTTTTT GAGTTTGTGT CGGTTTTTCT GAAGTTCATT 4740

TTCAACACGA CGAATCAGTT CACTGGCCTG CTGTTTGACG CGGTCGCGCT CAGCCTTATC 4800

CTTATAGTAG GTGTCCAACA AATCAGAAAG ATTTGCAAAA GGCTCTCCCA CCTGATTTGC 4860

AAAAGGAACT GGACTGAAGG AAGTCTCAGT CAAGCATGGC TTGGTTTCTT GATTGAAAAA 4920

ATTTCGGAAA GCGGAAAGTT TTTCACTAAC CAGTATCCTT TCCAATTCAT TTGCCGTATC 4980

GCGTCCCAGA CCTTGAAAGA GGCTTTGAAG ATTTTTTGCT GTTAGTTCTT GGGTTTGCAG 5040

GATTTCAAAG AGCTTTTCAT CCTTGATAGT AAAAGGATTG AGAGATTTTG TACTTGGCGG 5100

AGCGATATAG GTCGATCCTG GAAGTAAGGT GCGGTAGCTA TTTTGTGAAA AGCCGACGTG 5160

TTTGATAACT TCGAGGATTT TATGACTGCT TTTATCGACC AGTAGAATAT TACTGTGTTT 5220

CCCCATAATT TCGATAATCA AGGTAGCCTG GATATGGTCT CCAATCTCGT TTTTATTGGA 5280

AACTGTAATT TCCACAATAC GGTCATTTTC CACTTGCTCA ATCGACTCAA TCAGGGCCCC 5340

CTGCAAATAC TTTCTCAAAA CCATGATAAA GGTAGAAGGT TGAGCTGGAT TTTCAAAAGT 5400

CGTTTGGGTC AGCTGAATGC GTCCAAAAAC TGGATGGGCA GAAAGGAGCA GGCGATGGCT 5460

TTGGCGATTG CTGCGGATTT GCAAGACCAA CTCTTGTTCA AAAGGCTGAT TGATTTTCTG 5520

GATGCGACCA TTCACTAATT CGCTTCGCAA TTCCTCAACT ATGTGGTGTA AAAAAAATCC 5580

GTCAAATGAC ATCGTTCTCT CCTTGTGATT GTATTCCATA GTATTATATC AAAAAGGTAG 5640

AATAAAATCA TGGAAATGTG GTATAATAAA GCCAAGTAAA GAGAAACGAG AAGCACATGT 5700

ATATTGAAAT GGTAGATGAA ACTGGTCAAG TTTCAAAAGA AATGTTGCAA CAAACCCAAG 5760

AAATTTTGGA ATTTGCAGCC CAAAAATTAG GAAAAGAAGA CAAGGAGATG GCAGTCACTT 5820

TTGTGACCAA TGAGCGTAGT CATGAACTTA ATCTGGAGTA CCGTAACACC GACCGTCCGA 5880

CAGATGTCAT CAGCCTTGAG TATAAACCAG AATTGGAAAT TGCCTTTGAC GAAGAGGATT 5940

TGCTTGAAAA TTCAGAATTG GCAGAGATGA TGTCTGAGTT TGATGCCTAT ATTGGGGAAT 6000

TGTTCATCTC TATCGATAAG GCTCATGAGC AGGCCGAAGA ATATGGTCAC AGCTTTGAGC 6060

GTGAGATGGG CTTCTTGGCA GTACACGGCT TTTTACATAT TAACGGCTAT GATCACTACA 6120

CTCCGGAAGA AGAAGCGGAG ATGTTCGGTT TACAAGAAGA AATTTTGACA GCCTATGGAC 6180

TCACAAGACA ATAAACGAAA ATGGAAAAAT CGTGACTTGA TATCCAGTTT AGAATTTGCT 6240

TTGACAGGTA TTTTTACTGC TATCAAGGAA GAACGCAATA TGCGAAAACA CGCAGTGACG 6300

GCTCTAGTGG TCATCCTTGC AGGTTTTGTT TTTCAGGTGT CACGAATCGA ATGGCTCTTT 6360

CTCCTATTGA GTATTTTCTT GGTAGTAGCC TTTGAGATTA TCAACTCTGC TATTGAAAAT 6420

GTGGTGGATT TGGCCAGTCA CTATCACTTT TCCATGCTGG CTAAAAATGC CAAGGATATG 6480

GCGGCCGGCG CGGTATTAGT GGTTTCTCTT TTCGCAGCCT TAACAGGCGC ATTGATTTTT 6540

CTCCCACGAA TCTGGGATTT ATTATTTTAA ACAGTAAGAG GAAATTATGA CTTTTAAATC 6600

AGGCTTTGTA GCCATTTTAG GACGTCCCAA TGTTGGGAAG TCAACCTTTT TAAATCACGT 6660

TATGGGGCAA AAGATTGCCA TCATGAGTGA CAAGGCGCAG ACAACGCGCA ATAAAATCAT 6720

GGGAATTTAC ACGACTGATA AGGAGCAAAT TGTCTTTATC GACACACCAG GGATTCACAA 6780

GCCTAAAACA GCTCTCGGAG ATTTCATGGT TGAGTCTGCC TACAGTACCC TTCGCGAAGT 6840

GGACACTGTT CTTTTCATGG TGCCTGCTGA TGAAGCGCGT GGTAAGGGGG ACGATATGAT 6900

TATCGAGCGT CTCAAGGCTG CCAAGGTTCC TGTGATTTTG GTGGTGAATA AAATCGATAA 6960

GGTCCATCCA GACCAGCTCT TGTCTCAGAT TGATGACTTC CGTAATCAAA TGGACTTTAA 7020

GGAAATTGTT CCAATCTCAG CCCTTCAGGG AAATAACGTG TCTCGTCTAG TGGATATTTT 7080

GAGTGAAAAT CTGGATGAAG GTTTCCAATA TTTCCCGTCT GATCAAATCA CAGACCATCC 7140

AGAACGTTTC TTGGTTTCAG AAATGGTTCG CGAGAAAGTC TTGCACCTAA CTCGTGAAGA 7200

GATTCCGCAT TCTGTAGCAG TAGTTGTTGA CTCTATGAAA CGAGACGAAG AGACAGACAA 7260

GGTTCACATC CGTGCAACCA TCATGGTCGA GCGCGATAGC CAAAAAGGGA TTATCATCGG 7320

TAAAGGTGGC GCTATGCTTA AGAAAATCGG TAGCATGGCC CGTCGTGATA TCGAACTCAT 7380

GCTAGGAGAC AAGGTCTTCC TAGAAACCTG GGTCAAGGTC AAGAAAAACT GGCGCGATAA 7440

AAAGCTAGAT TTGGCTGACT TTGGCTATAA TGAAAGAGAA TACTAAGTAG AGGTAGGCTC 7500

ATGCCTGCTT CTTGTTTTTA CAGAAGGAGG ACTTATGCCT GAATTACCTG AGGTTGAAAC 7560

CGTTTGTCGT GGCTTAGAAA AATTGATTAT AGGAAAGAAG ATTTCGAGTA TAGAAATTCG 7620

CTACCCCAAG ATGATTAAGA CGGATTTGGA AGAGTTTCAA AGGGAATTGC CTAGTCAGAT 7680

TATCGAGTCA ATGGGACGTC GTGGAAAATA TTTGCTTTTT TATCTGACAG ACAAGGTCTT 7740

GATTTCCCAT TTGCGGATGG AGGGCAAGTA TTTTTACTAT CCAGACCAAG GACCTGAACG 7800

CAAGCATGCC CATGTTTTCT TTCATTTTGA AGATGGTGGC ACGCTTGTTT ATGAGGATGT 7860

TCGCAAGTTT GGAACCATGG AACTCTTGGT GCCTGACCTT TTAGACGTCT ACTTTATTTC 7920

TAAAAAATTA GGTCCTGAAC CAAGCGAACA AGACTTTGAT TTACAGGTCT TTCAATCTGC 7980

CCTTGCCAAG TCCAAAAAGC CTATCAAATC CCATCTCCTA GACCAGACCT TGGTAGCTGG 8040

ACTTGGCAAT ATCTATGTGG ATGAGGTTCT CTGGCGAGCT CAGGTTCATC CAGCTAGACC 8100

TTCCCAGACT TTGACAGCAG AAGAAGCGAC TGCCATTCAT GACCAGACCA TTGCTGTTTT 8160

GGGCCAGGCT GTTGAAAAAG GTGGCTCCAC CATTCGGACT TATACCAATG CCTTTGGGGA 8220

AGATGGAAGC ATGCAGGACT TTCATCAGGT CTATGATAAG ACTGGTCAAG AATGTGTACG 8280

CTGTGGTACC ATCATTGAGA AAATTCAACT AGGCGGACGT GGAACCCACT TTTGTCCAAA 8340

CTGTCAAAGG AGGGACTGAT GGGAAAAATC ATCGGAATCA CTGGGGGAAT TGCCTCTGGT 8400

AAGTCAACTG TGACAAATTT TCTAAGACAG CAAGGCTTTC AAGTAGTGGA TGCCGACGCA 8460

GTCGTCCACC AACTACAGAA ACCTGGTGGT CGTCTGTTTG AGGCTCTAGT ACAGCACTTT 8520

GGGCAAGAAA TCATTCTTGA AAACGGAGAA CTCAATCGCC CTCTCCTAGC TAGTCTCATC 8580

TTTTCAAATC CTGATGAACG AGAATGGTCT AAGCAAATTC AAGGGGAGAT TATCCGTGAG 8640

GAACTGGCTA CTTTGAGAGA ACAGTTGGCT CAGACAGAAG AGATTTTCTT CATGGATATT 8700

CCCCTACTTT TTGAGCAGGA CTACAGCGAT TGGTTTGCTG AGACTTGGTT GGTCTATGTG 8760

GACCGAGATG CCCAAGTGGA ACGCTTAATG AAAAGGGACC AGTTGTCCAA AGATGAAGCT 8820

GAGTCTCGTC TGGCAGCCCA GTGGCCTTTA GAAAAAAAGA AAGATTTGGC CAGCCAGGTT 8880

CTTGATAATA ATGGCAATCA GAACCAGCTT CTTAATCAAG TGCATATCCT TCTTGAGGGA 8940

GGTAGGCAAG ATGACAGAGA TTAACTGGAA GGATAATCTG CGCATTGCCT GGTTTGGTAA 9000

TTTTCTGACA GGAGCCAGTA TTTCTTTGGT TGTACCTTTT ATGCCCATCT TCGTGGAAAA 9060

TCTAGGTGTA GGGAGTCAGC AAGTCGCTTT TTATGCAGGC TTAGCAATTT CTGTCTCTGC 9120

TATTTCCGCG GCGCTCTTTT CTCCTATTTG GGGTATTCTT GCTGACAAAT ACGGCCGAAA 9180

ACCCATGATG ATTCGGGCAG GTCTTGCTAT GACTATCACT ATGGGAGGCT TGGCCTTTGT 9240

CCCAAATATC TATTGGTTAA TCTTTCTTCG TTTACTAAAC GGTGTATTTG CAGGTTTTGT 9300

TCCTAATGCA ACGGCACTGA TAGCCAGTCA GGTTCCAAAG GAGAAATCAG GCTCTGCCTT 9360

AGGTACTTTG TCTACAGGCG TAGTTGCAGG TACTCTAACT GGTCCCTTTA TTGGTGGCTT 9420

TATCGCAGAA TTATTTGGCA TTCGTACAGT TTTCTTACTG GTTGGTAGTT TTCTATTTTT 9480

AGCTGCTATT TTGACTATTT GCTTTATCAA GGAAGATTTT CAACCAGTAG CCAAGGAAAA 9540

GGCTATTCCA ACAAAGGAAT TATTTACCTC GGTTAAATAT CCCTATCTTT TGCTCAATCT 9600

CTTTTTAACC AGTTTTGTCA TCCAATTTTC AGCTCAATCG ATTGGCCCTA TTTTGGCTCT 9660

TTATGTACGC GACTTAGGGC AGACAGAGAA TCTTCTTTTT GTCTCTGGTT TGATTGTGTC 9720

CAGTATGGGC TTTTCCAGCA TGATGAGTGC AGGAGTCATG GGCAAGCTAG GTGACAAGGT 9780

GGGCAATCAT CGTCTCTTGG TTGTCGCCCA GTTTTATTCA GTCATCATCT ATCTCCTCTG 9840

TGCCAATGCC TCTAGCCCCC TTCAACTAGG ACTCTATCGT TTCCTCTTTG GATTGGGAAC 9900

CGGTGCCTTG ATTCCCGGGG TTAATGCCCT ACTCAGCAAA ATGACTCCCA AAGCCGGCAT 9960

TTCGAGGGTC TTTGCCTTCA ATCAGGTATT CTTTTATCTG GGAGGTGTTG TTGGTCCCAT 10020

GGCAGGTTCT GCAGTAGCAG GTCAATTTGG CTACCATGCT GTCTTTTATG CGACAAGCCT 10080

TTGTGTTGCC TTTAGTTGTC TCTTTAACCT GATTCAATTT CGAACATTAT TAAAAGTAAA 10140

GGAAATCTAG TGCGAGTAAA AATCAATCTC AAATGCTCCT CTTGTGGCAG TATCAATTAC 10200

CTAACCAGTA AAAATTCAAA AACCCATCCA GACAgATTGA 10240

(2) INFORMATION FOR SEQ ID NO: 33:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13206 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

CGCTTTATCG TGGACGTGGT CAAGCCGAGA ATTTCATCAA GGAGATGAAG GAGGGATTTT 60

TTGGCGATAA AACGGATAGT TCAACCTTAA TCAAAAACGA AGTTCGTATG ATGATGAGCT 120

GTATCGCCTA CAATCTCTAT CTTTTTCTCA AACATCTAGC TGGAGGTGAC TTCCAAACTT 180

TAACAATCAA ACGCTTCCGC CATCTTTTTC TTCACGTGGT GGGAAAATGT GTTCGAACAG 240

GACGCAAGCA GCTCCTCAAA TTGTCTAGTC TCTATGCCTA TTCCGAATTG TTTTCAGCAC 300

TTTATTCTAG GATTAGAAAA GTCAACCTGA ATCTTCCTGT TCCTTATGAA CCACCTAGAA 360

GAAAAGCGTC GTTAATGATG CATTAAAGAA CAGTCGAGAT GAAAAAATCG TGTGACGCAC 420

CAAGGGAGGA GTCTGCCCTT TTGAGGAAAT CTAGCGAGGA AAAACGATAC TGGAACAGCA 480

GAAAGTAAAA CTGACCTCAT GAGGAGGAAG AAAGTGGCTC ATGAGGTCAG GGGTTTTGTA 540

AGTTACATCT AGTTGAGAGA GGTATGAATG ATTTGGGATT AATCATTTCT TGTTTTAAAT 600

CAGGAGAATA GTAACGATTT TTTCCTTTTT TGACGAACTC TATTCCGTAA CGATCAATCA 660

ATTTAATCAT GTACCTAATA TTAGAATTGT TTATCCCAAA TTTATTTGAA AGCTTCTCTA 720

AGCTATATCC TTGTTTTCTA AGTTCATAGA TCTGAACTTT ATCATCATAA GTTAGTTTCA 780

TAATAAAAAC ACCCCAAAAG TTAGATTTTT TCTGTCTAAC TTTTGGGGGG CAGTTCATTC 840

AACACCTGAT ACTATGCGTT TTTCTTATTT GAAATACTTT TTACTCAACC TCTTTATACT 900

CAATGAAAAT CAAAGTGCAA ACTAGAAAGC TAGCCTCAGG CTGCTCAAAA CAGTGTTTTG 960

AGGTTGCAGA TGGAAGCTGA CGTGGTTTGA AGAGATTTTC GAAGAGTATT ACTTAATCTT 1020

CTTGATACTT TGACTAAGAA TAAATCCTAC AATCATCCCT ACCATATTTT GCATAAAATT 1080

CGGTAGAATT TCTGGGAGGG CTGCTGCCCA GCCATTCATC AAAGCAGAAC CCAAGGCGTA 1140

GCCTCCTACC ATGGCAATAG TTGCTAAAAT AAGGCCTAAC CACTGACTTT TTCCTTTAAA 1200

TCCTGCGAAA AATCCCTGCA AGCCATGGTT GACCAAGCTA AAGAACATCC ACTGAGGGTA 1260

GCCTGATAAG AGGTCAATCA AGAAACTTGC TAGTCCTCCG ACTACCGCTC CTTCACGACT 1320

ACCAAAGTAA AAGGCCGCAA AGAAGACACC AGCATCTAAA AGAGTTAGAA TTCCTGTAGG 1380

TGTTGGGATT TTTAAGAAAT AACCTAGAAC CACAGAAAGG GCGGTTAATA GGGATACAAG 1440

GGCGATTTTA GTTGTTTTTG TTTGCTTCAT ATTGTCTTAC TCCATACTGA TCTGCTTGTG 1500

CAATAGCACG ATAAACGAAA GCCTTAGAGC TTTCTACTGC TGGCAAAAGT TTATCACCTT 1560

TAACCAGGTG ACTGGCAATG CTAGAGsCAA AGGTACAACs TGCACCAGCA TTTTGGCCTT 1620

GGATAACTGG ATTTTCTAGG ATAGTAAAGG TCTGTCCATC ATAAAAGACA TCCACAGCCT 1680

TGTCCTGACT AAGACGATTG CCTCCCTTGA TAATGACTGt GGCGCTCCTA AATCATGCAA 1740

TTTCTGCGCT GCAGTTTTCA TGTCTTCCAA GGTTTTAATT TCCTGACCGG ATAATAATTC 1800

TGCTTCTGGG AGATTAGGCG TAATCACACT GACATAAGGG AAAAAGCGAA TCAACTCTTG 1860

GCAGAGCTCA CTGACAGCTA CATCATGCGT TTCCTTGCAG ACCAAGACAG GATCCAACAC 1920

CACAGGTACT CCTGGGCGTT GTTTGATAAA GTCCAAGGCC TTCTCAGCCA CGCTGACAGT 1980

AGGGAGAAGA CCAATCTTAA TTCCCCCAAA TTCCACATCA CGCAAGCTAT CTAATTCATG 2040

TTGAAAAATG GTATCATCAG TTGGAAAGAC TTCAAATCCT TTTTCTGTCA AGGCTGTCAA 2100

ACAAGTCACT GCTACAAACC CATGCAAGCC GTTCAAGGTA TAGGTAGCCA AATCAGCTGA 2160

CAGTCCACCA CCACTAAAAA TATCATTTCC AGAAAGTGCT AAAATACGAT TATTCTTCAT 2220

AACGAATCTC CTTTAAATAC AAACCATTTG GTGCTGCAGT GGGACCTGCA AGTTGCCTGT 2280

CCTTCTTCTC CAAGATGAGA TCAATCTGCT CTACTGGCAT GCGGTTGTTA CCGATTTTGA 2340

GAAGAGTCCC CACCATATTG CGAATCTGTT TATACAAGAA ACCATTTCCT GAAAAGGTAA 2400

AGGTCAAAAA TTGTCCTGTC TCATCGACTA TTAAACTAGC TTCTGTGATG GTGCGAACCT 2460

TATCCTCTAC ACTAGTCCCA GAGGCTGTAA AACCGGTAAA ATCATGGGTT CCCTCTAGCT 2520

TTTTGATTGC AATCTGCATT CGTTCCACAT CGAGTGGGTA GGGAAAGTGG GTGGCATAGT 2580

GACGGCGCAT CGGATTTTTG GGACGTCCTC TATCCACAGT AAACTCATAG GTCTTGCTAT 2640

GCTTGGCATA ACGGCAATGA AAATCATCTG CCACAAGCTC AATCGAAATC ACATCAATAT 2700

CTTCAGGAGA CTGGGTATCC AAGGCAAAAC GGAGTTTCTC CTCATCCATC TGATAAGGCA 2760

GGTCAAAATG AATCACCTGT CCCAGGGCAT GAACCCCACT ATCTGTCCTA CCAGCACCGT 2820

GAACAGTAAT GGCTTGCCCT TTATTTAATC TGGTCAAGGT TTTTTCAATT TCTTCCTGAA 2880

CGCTACGCGC ATGAGGCTGG CGCTGAAAGC CAGCAAAGGC ATAACCATCA TAGGAAATAG 2940

TTGCTTTATA TCTCGTCATA GCCTCTATTT TATCAAGAAA TTAGTCTGTA AACAAGGACC 3000

TAAAACAAAT ATTGTATGGG TATAAAAATC TCATACTCTT CGAAAATCTC TTCAAACCAC 3060

GTCAGTTTCC ATCTGCAACC TCAACACACT ATTTTGAGCA ACCTGCGGCT AGCTTTCTAT 3120

AGTAGATTGA AATAAGATAT GAACAACTCT ATTAGGAAAG TCAAATTAAT TTCTAGAAAT 3180

ATTTTAGCAG CTACAGCGTA CTATTCCAAA CTCAATCAAC TATAGTTTGC TCTTTGATTT 3240

TCATTGAGTA TCAAAAGAAA AACTTAGGAA TCAATCCTAA GCTCTCTTCT GAAGTAGGTA 3300

CATGACAAAG ATAGAGATTA CAATCAACCA ACCTCCTAAG ATACTAAAGA CCAACATCCC 3360

ATTGTGAGTT AGTAAGCCAA TTGCACCTAG AACGAATGGG GTCGTAAAGG CTCCGAAACT 3420

ACAGCCTAAT ACAGCAAATG AAGTTGCTTG ATTGAGGAGT TTAGCTGGAA TTCGTTCAGA 3480

GACAAGTTGA AAGACCGTCG TCAAGACTAC ACTATAGGCA AATCCAGCCA GAACACTTCC 3540

TGCTACTACC ACCCACAAGG ATGAAGACAA GGCAATCACG ATTTGCCCCA AGCCAAAGGT 3600

AATACCAGAC CAGAGGAGCA GTTTCTCTTT AAAGATAGAA ATCAAGAAAG AAAAACTCAC 3660

CCCAGCCACA ATCCCGATCA ACTGCATGAT ACTAAGAACA AAACTAGATA ACTGGGCATC 3720

CCCCAATCCT CTTTCCACCA TCAAACTTGG AATACGGATG GTAATAGCTG TATTGGTACA 3780

AACTACAACT GCCGCTTCGA TAGCTAAGGT AAAAATCAAG CCTTTCATTT CTCGAGTTAA 3840

ACGACTTGCT TCCTTCGCTC TTTTCTTGAC TTCTTTCTTT GATTTTCCAT AAGGGACAAA 3900

GAGCAGATAA AGGGGCAGCA CCAAAAATCC AGCACTATAG GCTAGAAAGA TAGCTGTCCA 3960

ACCAAAGGCC AACAACTGAC CGACGGCCAA GGTAATGAGA GAAGCTCCAA CGACCTCTGC 4020

AGAAGCGCGT AGCCCTAACA TCTGAATTCG CCTTTTTCCT TGGTAGCGTT CACTGATAAT 4080

AGAAATGGCC TTGGCATTGA TCATCCCAAG ACCCAAACCA AAGAGAAGCC GTGTTCCAAA 4140

GACAAAGGGA TAGGCTTGGT ACCAGAAGGG AGCTGTACCG CTCAATGATA AAATCAGCAA 4200

GCCCAAACTA ATCTGTAAGC GCTCAGGAAA TATTTTTTCT AAGAAACCAT TTAGCAGTAA 4260

CATCATCATG ATTCCAAAGG AAGGCAAGCT CACCAAGAGC TCAATTTGTT CCTTAGAATA 4320

ACCCTGATAA TAGTCAAACA TGGCTGGTAG GGCACTCGAA ATGGAAAAGG AGGTAATCAA 4380

AACGAGGGAG AGAGCCAAAA TGCTGGCCCG TTCTAAAAAT TGTTTCATGA AATCTCTTTC 4440

TATATTTCTC TTAATCTTCT ACTTTTTTGA TAGTTATCAA ATAAGCAAGA AAAGAAGAAG 4500

CCTCATTGGT TTGTAGACTC CTTCTTAAAT TCGAAAATGA ATCCCTTGTA TCTTATACTC 4560

AATGAAAATC AAAGAGCAAA CTAGGAAGCT AGCCGCAGGT TGTTCAAAAC AGTGTTTTGA 4620

GGTTGCAGAT GGAAACTGAC GTGGTTTGAA GAGATTTTCG AAGAGTATTA GGATGACTTT 4680

CTCTTGATTT GCTTGATAAA GTAGAAAATA AATCCTGCTA CCATATAGGC AACAAAGATA 4740

ATCAGACACC ACTTAAACAC AACATTCCAA CCCTTGTTCA CATTCAAAAA GAAGTAAGGG 4800

AAAGGATTAT CCTTGGCATT TGGAATATTG AGTTTTAGAA CCAAGCCATT AAAAAGAGCA 4860

AACATCATAT ACAGAAAGGG TAAAATGGTC CACACTGCTG GATCCCAAAT CTTGTATTGA 4920

CCCTGTTTGT CAAAAAAGAG GGTATCCGCT AAAAACCAGA TGGGAACGAT ATAGTGGCAA 4980

AGGAAATTTT CTAGGGTATA GAAATTAGTC GCAATGGGCG CCAAGAGGAA ATGGTAAATC 5040

ACACAGGTAA TCATGATACT CATGGTGACC CCACCTTTTA AGCGCAAGAG ACTTGGCCTT 5100

TGCCAATTTT CACCTACACG GCTCATAACC TTTAGAAGAT AAAGGGTAAA AATAGTTACC 5160

AAGAGGTTGG ACAGAACCGT GTAATAGAGA AGCATCCCAA AACCACCATG CTTAGTAATT 5220

TCAAGATAAA CTCCCGTAAA AGCCGCTAGA AACAAGAAGA TACGGCTATA AAATACAAGT 5280

TTATAGTGTT TTGACATGCT TAAATCTTCC TCACAAACTC TGATTTAAGT TTCATGGCAC 5340

CAAAACCATC AATCTTACAG TCGATATTGT GGTCGCCTTC TACGATGCGG ATATTTTTCA 5400

CGCGCGTCCC TTGTTTCAAA TCTTTTGGCG CACCTTTTAC TTTCAAGTCC TTGATGAGAG 5460

TTACTGTATC ACCATCAGCC AATTTATTTC CGTTGGCATC GATAGCGACA AGACCTTCTT 5520

CTACTTCTGC AACTTCAGCA GGATTCCACT CATGAGCACA CTCTGGGCAA ACCAGTAGGG 5580

CACCGTCTTC GTAGACATAC TCTGAGTTAC ATTTTGGACA ATTTGGTAAA TTGTTCATGG 5640

TTTCTCCTTA TCATCATTCA CTATTCTTTG AAAATCAAAA TTTCTCGAAC AGCAACTATT 5700

ATACCCTAAA ATCAGCATTT TGACAAATTT AGAAAAAAAC CGATATCAAT CTATCGGCTT 5760

TTCTACATTT ACATTCTTTT TTCAGCTTCT GCTTTGATTT TTTCAACTAC TTCTTGAATG 5820

TTCAAACCAG TTGTATCAAG GTAGACAGCA TCCTCTGCTT GTTTGAGAGG AGAAGTCTCA 5880

CGATGACTAT CCTTGTAGTC ACGCGCAGCA ATTTCCTTTT TTAGGGTTTC AAGGTCTGTT 5940

TCAATTCCCT TGGCAATATT TTCCTTGTAA CGACGCTCTG CTCTCTCATC AACAGAAGCT 6000

ACTAGGAAAA TTTTCAATTC TGCTTGTGGC AATACAACAG TTCCAATATC GCGACCATCC 6060

ATGACAATCC CGCCTTGCTG GGCAATTTCT TGTTGGAGAG AAACCAGTTT CTCACGCACT 6120

TGAGGAATTG CTGCAATAGC AGAAACATGA TTGGTCACTT CATTTTCACG GATAGGATGG 6180

GTAATATCCA CATCTCCTAC AAAAACAAGC TGGTCTCCAG TTTCTGAACG TCCAAAGCTG 6240

ATTGGATGCT GGTCCAACAA GGCTAGAAGG GCTTCGACTT CTTCAACTCC TAATTGGTTC 6300

TTAAGAGCCA TATAGGTCGC TGCACGATAC ATAGCTCCTG TATCAAGGTA GGTGAATCCA 6360

AAATCCTTAG CAATAATCTT TGCGACCGTA CTCTTACCGC TGGAAGCAGG ACCATCAATA 6420

GCAATTTGAA TTGTTTTCAT ATCGGCTCCT ATTTTATTTT TATAACATCA CCTGGATTAG 6480

CAAACCAAGA TCCTGTAGCC ATGTGCCCAG GATTCAAGGC CTCTAACTGA GCAATGGAGA 6540

TTCCTGCACG AGCGGCAATA GCTGCTTCCC CTTCTCCTGC GAGAACTTTA ATCGTTCCTT 6600

CAGGATTAGC AGCTTCTTCT GAACTACTAG AAGTAGATTC TGGCTCTGAA CTCTGCTCAG 6660

GCTGAGAACT ACTTGAAGAT GAGATTTGTA CTACACTGGC ATCAGAATCA TGAAAGCCTT 6720

TTAAGGCTGC TGTGCGATTA CTCCCCCCCG ATGATAGATA GATGAGAACG ATGACCATCA 6780

CCACCACAAT TACAAAGAAA ATACTAGCTA GGATCGTCAA AATACGATTA GCCATCCTAT 6840

CAGCCCCTCC GTGGTTTCGA TGCCGACGCT CTGCTCTTGA TTCTTCTTGA TCATAGATAT 6900

CTTCTTGCCA CGGTTCTTTT GCCATACCTT ACTCCTTGTT TTTTTTTACT TTTCTTATTA 6960

CAATATAAAT ATGAACATGA AAATCACACT TATACCTGAA CGATGTATCG CCTGTGGGCT 7020

TTGCCAAACT TATTCTGATT TATTTGATTA CCACGATAAT GGAATCGTGC GTTTTTACGA 7080

TGACCCTGAC CAACTGGAAA AAGAAATTTC TCCTAGTCAG GATATCTTAG AGGCTGTTAA 7140

AAATTGCCCA ACTCGCGCCC TGATTGGAAA CCAGGAAGCC TAAATCAATG GCGATAATCC 7200

ACTCCCTCTA GTTTAGCACA TTTCCATGTA AAATTATAGT CTTTTCACTT TATTTTTTTC 7260

TGTAAAATCA GGAAGGTCAC TTTTTTCTTT GATAAGATAA AGTGGTCTTT TTTTAGTCTC 7320

TAAATAAATC TTACTGATAT ACTTGCCGAG AATCCCAATG GTCAAGAGTT GAATGCCTCC 7380

AAGAAAGAGA ATAACAGCCA TCAGAGAGGT CCAACCAGAT GTCGGATTGC CCAAAATGAG 7440

GGTCCGAACC ACAACAAAAA AGGTCATCAG CAGAGAAAGA AAACAAGATA GGAGACCAGC 7500

TACAAAGGCT ATAATCAAGG GAAAATCTGA AAAATTAATA ATCCCTTCAA TGGAGTAGAA 7560

AAAGAGTTGC CTAAAACTCC AACTTGTCTT GCCAGCCTGC CTTTCGACAT TTGGATAGTC 7620

CAAATAGTAG GTTTTGAAAC CCACCCAGGC GAAGAGCCCC TTTGAAAAAC GATTGGACTC 7680

GGTCAAGCTT AAAATGGCAT CGACTACAGA CCTTCTCATC ATACGAAAAT CACGGACACC 7740

CGACGGCAGA GCTACTGGGC TGATTTTTTG CATGAGGCGA TAAAAGAGAA CAGCACAGAA 7800

ACTGCGAAAG AAGGGTTCTC CCTCCCGACT AGTTCTCCGT GTCCCAACGC AGTCCAAGTC 7860

TACATTTTTG TCTAATACAT TTTTCATCTC AAACAACATA CTAGGAGGAT CTTGGAGGTC 7920

TGCATCCATC ACCACCACCA AATCTCCTGT CGCATATTGC AAGCCTGCAT AAAGGGCTGC 7980

TTCTTTGCCA AAATTTCGAG AGAAAGAAAT ATAATGGACT GCCGGATTTT GCTCCCGATA 8040

GGCCTTTAAG AGTTCCAAGG TCCCATCACT TGATCCATCA TCGACAAAGA CATACTCGAT 8100

TTCTGTTTCC AAATCTGGAA GTAAAGCTTC CAGAGCCTGA TAAAAAAGAG GAAGTACTTC 8160

CTCTTCGTTT AAACAAGGGA CGATGATTGA AATCATCATC TTAGTCTTCA AATCCATTTG 8220

GATGCTTGCT TTGCCAACGC CATGCGTCTT CACACATTTG GGTGATGTCG AGTTCTGCTT 8280

CCCAACCGAG TTCTGCTTTA GCTTTTGCCG GGTCTGAGTA GCAGGCAGCG ATATCACCTG 8340

GGCGACGTTC TACGATGCGG TAAGGAATAG GACGGCCCAC CGCTTTTTCC ATGTTTTGGA 8400

TAATTTCAAG AACTGAGTAA CCTTTACCAG TTCCAAGGTT ATAAACGTTT AGTCCTGAAC 8460

CTTTTTGGAT TTTTTTCAAA GCTGCAACGT GACCCTTAGC CAAATCGACA ACGTGGATAT 8520

AGTCACGAAC ACCTGTTCCA TCTTCCGTAT CGTAATCGTC TCCAAACACT TGCACTTGCT 8580

CTAATTTTCC AACGGCTACT TGAGTCACAT ATGGCAAGAG ATTGTTTGGA ATACCGTTTG 8640

GATTTTCTCC CAAATCACCA CTCTCATGGG CTCCGATTGG GTTAAAGTAA CGAAGCAAGA 8700

CAACATTCCA TTCTGAGTCT GCTTTGTAAA TATCAGTCAA AATTTCCTCT AGCATGAGCT 8760

TAGTACGACC GTATGGGTTG GTCACTGAAA GTGGGAAATC TTCCAAGATG GGCACTGTGT 8820

GCGGATCCCC GTAAACTGTC GCAGAAGAAC TGAAGATGAT GTTTTTACAG TTGTTTTCTT 8880

CCATGGCTTT CAAAAGGCTG ACAGTTCCAG CGATATTGTT GTCATAGTAG GCAAGAGGGA 8940

TACGTGTTGA TTCGCCAACA GCCTTCAAAC CAGCAAAGTG AATGACACCA GTCGGTTCTT 9000

CCTGCTTGAA AATATCTCTG AGGGTATCTG TGTCACGAAT ATCTGCCTCA TAGAAAGGAA 9060

TCTCAACTCC TGTGATTCCT TCAACAACTT CTAAACTCTT ACGATTGCTA TTGACAAGAT 9120

TATCCACCAC AACAACTTGA TGACCTGCTT GGATCAATTC AATAACAGTG TGGGTTCCAA 9180

TAAAACCGGC ACCACCAGTT ACCAAAATCT TTTCTTGCAT CTTTTTTCCT CGATTCTCAG 9240

ATTATTTTTT CTTATTTTAC CATTTTTGAC AGGGAATGTC ATTTGCCATC CTAAACTACC 9300

TGATAAAATT TCAGTAAAAT GCTTATACTC TTCGAAAATC CAATTCAAAC TACGTCAACG 9360

TCGCCTTGCC ATGGGTATGG TTACTGACTT CGTCAGTTCT ATCCACAACC TCAAAACAGT 9420

GTTTTGAGCT GACTTCGTCA GTTCTATCCA CAACCTCAAA GCAGTGCTTT GAGTAACCCG 9480

CGGCTAGTTT CCTAGTTTGT TCTTTGATTT TTATTGAGTA TTATTCGCTT TTTACTCGTT 9540

TGACATAGTT TTCAATTGGG TAATTTAGAG GGTCCAAGGT CAACTCCTTG TCTTGGATCA 9600

GTTGGGCTAG ATGGTAACCA ATGATAGGAC CAGTTGTGAG GCCTGATGAA CCTAGTCCAC 9660

TGGCTGCATA GACACCAGTT AAGTCAGGCA CCTGCCCAAA GAAAGGAGAG AAATCACTGG 9720

TGTAGGCACG GATTCCAACA CGCTCAGATT TTGAAGTAGC TTCAGCCAAA ATCAGATAGT 9780

GAGTCAAGGT GGCCTCCTCC ATTTGTTGGA GCAAGGTTTC ATCTACCGTC AAATCAAATC 9840

CCATGTCATT TTCGTGGGTA GCGCCTAAGG ATAATTTCCC ACCTGCAAAG GGAATCAAAT 9900

CCCACTCCCC TTCTGGCATG ACAACAGGGT AATCTTCCAT GTCTTGGGCA AGCTGATAAT 9960

CTCGTAGTTG TCCTTTTTGA GGACGGACAT CCACTTCATA ACCTAAAGGC TCTAACATGT 10020

CCCCCAACCA AGCTCCCGTC GCCAAAATAA CCTGCTCAAA CTCCTCTTCA CCAATCTGGT 10080

AGCCTGATGC TAACGGTGTC AGAGTCACTT TTTCTTTGAC CAGCTTGACA TGACTGACTT 10140

CCAGCAAACG AGTCACTAAA AGTTGGCCAT CTACTCTCGC TCCACCAGAA GCATAGAGCA 10200

GGCGGTCAAA TCCCTGCAAA CCAGGGAATA ATTCATTAGC TGAGGCTTGG TTCAGAATGG 10260

CTAATTGCCC TATCAAGGGA GATTCTTCTC TGCGCTGGAG GGCCAGTTGA TAAAGTTCTT 10320

CCAAATTGGA TTCATCCTTT TTCAAGAGAA AGACTCCCGA ACGCTGGTAA AAGTCGATTT 10380

CTTGTCCTGA TTTCTCTAAA TCAGCTAATA AATCCACATA AAAATCAGCC CCCAAGCGCG 10440

CCATCTTGTA CCAGGCTTTA TTACGGCGTT TGGAAAACCA AGGACTGATA ATTCCTGCTG 10500

CGGCCTTGGT GGCTTGACCT TGCTCATGGT CAAAAACGGT CACCTCTAGG TCACTTTCTC 10560

TCGAGAGGTA GTAGGCAGCT GTTGCTCCCA CAATTCCTGC TCCAATAATG GCAACTTTTT 10620

TCATTGTCTT CACTTTCTAA CTAGATATGA TGGAAAGGAT TGGTTGATGC CTGACTAGGC 10680

AAGATATCAA TAGACCACCC CTTATCTTCC TTCCATTGAC TAAGAAGTGC TGCGATTTTT 10740

TCTACAAAAA TCACTTCGAT ATAGTGACCT GGGTCCAATG CAAGCAACCC ATCAGATAGC 10800

ATATCCTGAG CAGTATGGTA GTAGATATCA CCAGTGATAT AGACATCTGC CCCCTTTGCC 10860

AAAGCATCCT TATAGAAAGA CTGCCCGCTT CCACCACAAA TTGCTACTCT TGAAATAGGC 10920

TTCTGCAAAT CATCCTCTTG ATAATGCACC ATTCGAAGGC TATCTAGGTC AAAGACTTGC 10980

TTGACCTGTT GGGCCAATTC CCAAAATGTC TGAGGCTGAA TATTCCCAAT ACGTCCAATT 11040

CCACGTTCTG GACCTGTTTC CTGCAGATAA GTCGTCTCCT CGATTCCTAG CATCTGACAA 11100

AACCAGTCAT TGAGCCCATT TTCAACGATA TCAATATTGG TATGGCTGAC ATAAACTGCG 11160

ATATCATGCT TAATCAGGTC GATGTAAATC TGATTTTGCG GACGGCTGGC AAGCAAGTCC 11220

TTGATAGGAC GAAAGATAGG CGCGTGCTTG ACGATAATCA AGTCCACACC CTTTTCAATG 11280

GCCTCTGCCA CTGTCTCTTC ACGAATATCG AGGGCAACCA TGACCCTTTG GATACCCTTG 11340

TCTAAAGTGC CAATTTGCAG ACCACGGCTG TCTCCCTCCA TAGAAAATTC CTGAGGGCAA 11400

AAGGCTTCAT AAGCTTGGAT CACTTCACTT GCTAACATGG AGCACCTCCT TGATAGCTTG 11460

AATCTTATCT ACTAGAACTT GACGTTCTTC CAGATTTTTT TCTGGGATTT GTCCGAGGGC 11520

GAACTCTAGC TTCTCAGCTT CTTTTTGCCA TTTTTGGACA AATACTGGAC TGACTTCTTT 11580

GGACAAGAAG GGACCAAAGC GAACATCACT GGCTGATAGC TTCATTTGTC CTGCTTCCAC 11640

CACCAAAATC TCATAAAACT TTCCAGCTTC TTCTAAGATG CTTTCTGCTA CAATCTGGAA 11700

TCCATGATCC TGTAGCCAGA TACGCAAGTC GTCTTCACGA TTATTGGGCT GGAGGATCAA 11760

ACGCTCTACA TTAGCTAACT TCCCCAAACC TTCTTCTAAA ATCCTAGCAA TCAAACGACC 11820

ACCCATGCCA GCAATGGTAA TGACAGACAC TTGGTCAGTC TCTTCAAAAG CTGCCAAGCC 11880

ATTGGCTAAA CGGACTTGGA TTTTCTCCTT TAGGCCGTGA GCCTCAACAT TTTTAACCGC 11940

AGACTGATAG GGACCTTCCA CCACCTCACC TGCAATAGCG CTTTTGATTT GGCCTCTCTC 12000

AACCAACTCG ATAGGCAGAT AAGCATGGTC ACTTCCCACA TCTAGTAAAA TAGCCCCCTG 12060

TGACACAAAG GAAGCTACCA ATTCTAATCT CTTTGAAATC ATCTTCTCTC ACTTTCCAAA 12120

ACTCTATTAC CTCTTATTAT ACCACATTTC AATCTTCAAC TTCCCAGTAA TATAAGCACC 12180

TCTGGCGAAA GAAGTTTCAA TGTCCTAAAG TAATAAGTGA ATCCAATTGA AAGATTTTAA 12240

ACAATTTGCA AAAATGTCAA AAAATAAAAA ATAAACAGTT TATTCAGAAA ATTCTTGACA 12300

TATAAAAACA CATGGTAGAA TATAATTAGA AAGTTAGAAA AAATAAAAGT TTGACTAAAA 12360

TTTGTATTTG AAGGTGGTGT TCAGATAAGA AATTTAGTCA GACGAACCAC GAATTTGCTC 12420

TATGCTTTCT GGAATTTATC ATAACAGGAG GATACAGTCA TGGAACAAAC ATTGTTTGAA 12480

TTAGAACTAC TTCCAGAGGA AGATATCATT GTCACAGGTC TCCCTAAGTA TTGTTCTTTT 12540

ACTTGTTTAA TTACAGGTCG CTAGTTATAT TTTATATAAA ATAAGTAGCT TTACTTACGG 12600

AATAGGCTAG TGCTGTGTCT CTAGCCTATT TTAATAATTA GGAGTTTGTT ATGGATTTAT 12660

TAGAGAAAGA ATGTTTAAAA TGTGATAAAA ATTTCCAACA GGGTGATATT TGGAATTACT 12720

ATTATTTATC AGATAAGATG CCTGCACAAG GGTGGAAAAT ACACATAAGC TCCCAAATAA 12780

AAGACGCTGT AAATATTTTT AAGATTGTGT ATAAACTATC CCAACTAAAT AATTGTAGCT 12840

TTAAAGTTGT TAAAAATTTA GAGGAATTAA AAAAAATTAA TTCCCCTAGG GAAATGAGCC 12900

CTACTGCTAA CAAATTTATA ACTCTATATC CTAAGTCAGA ATCTGAAGCT AAGAGTATGA 12960

TTTGTAATCT TACGAATAGA CTGTCAGAAT TTAAGGCTCC AAAAATACTA TCTGACTATC 13020

AATGTGGAAT GCATTCTCCA GTTCATTATA GATATGGGGC TTTTTTAAAA AAACAAGCTT 13080

ATGATGAAAA AAATAAAAAA GTCATCTATT TATTGCTAGA TGAAAAAAGG AAGAACTATG 13140

TAGAAGATAA GAGACAAAAT TTCCCTAGTC TTCCTAGCTG GAAAATGGAT TTATTTTCAG 13200

AAGAAG 13206

(2) INFORMATION FOR SEQ ID NO: 34:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13104 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

CCGGATCCAG CGAAAAATAT GCTCTTTGAT GCTGTAAGTG GTCAAAAAGA TGCTAAAACA 60

GCTGCTAACG ATGCTGTAAC ATTGATCAAA GAAACAATCA AACAAAAATT TGGTGAATAA 120

AAAATTTGTT CAAGGGGGGT GGAAATCAAA TCCCCCTTTG AATTTATCAA TAGAGACACA 180

AATAATTTAG CTTTCTTATA AAAAAGTAGT ATCCTATGAA AGGAGTTAAT ATGGAAAAGC 240

AACAACCTAG TAAAGCAGCC CTGCTGTCTA TCATTCCTGG GTTAGGACAG ATTTACAATA 300

AACAAAAAGC CAAAGGTTTT ATCTTCCTTG GTGTAACCAT CGTATTTGTC CTTTACTTCC 360

TAGCACTTGC AACCCCTGAA TTGAGCAACC TCATCACTCT TGGTGACAAA CCAGGTCGTG 420

ATAATTCCCT CTTTATGCTG ATTCGTGGTG CCTTCCATCT AATCTTTGTA ATCGTTTATG 480

TACTCTTTTA TTTCTCAAAT ATCAAAGATG CACATACGAT TGCAAAACGC ATTAACAATG 540

GAATTCCAGT TCCACGCACA CTCAAAGACA TGATCAAAGG GATTTATGAA AATGGCTTCC 600

CTTACCTCTT GATCATTCCA TCTTATGTTG CCATGACCTT CGCGATTATC TTCCCAGTTA 660

TCGTAACCTT GATGATCGCC TTTACCAACT ACGACTTCCA ACACTTGCCA CCAAACAAGT 720

TGTTGGACTG GGTTGGTTTG ACCAACTTTA CAAACATTTG GAGCTTGAGT ACCTTCCGTT 780

CTGCCTTTGG TTCTGTTCTT TCTTGGACTA TCATTTGGGC TTTGGCAGCT TCTACTTTAC 840

AAATCGTAAT TGGTATCTTC ACAGCTATCA TTGCCAACCA ACCATTTATC AAAGGAAAAC 900

GTATCTTTGG TGTTATTTTC CTTCTTCCTT GGGCTGTCCC AGCCTTCATC ACTATCTTGA 960

CATTCTCAAA CATGTTTAAC GATAGTGTCG GTGCTATCAA CACTCAAGTA TTGCCAATCT 1020

TGGCTAAATT CCTTCCTTTC CTTGATGGAG CTCTTATTCC TTGGAAAACA GACCCAACTT 1080

GGACTAAGAT TGCCTTGATT ATGATGCAAG GTTGGCTCGG ATTCCCATAC ATCTACGTTC 1140

TGACCTTGGG TATCTTGCAA TCTATTCCTA ACGACCTTTA CGAAGCAGCT TATATTGACG 1200

GTGCCAACGC TTGGCAAAAA TTCCGCAACA TCACTTTCCC AATGATTTTG GCTGTTGCGG 1260

CACCTACTTT GATTAGCCAA TACACCTTCA ACTTTAACAA CTTCTCTATC ATGTACCTCT 1320

TCAATGGTGG AGGACCTGGT AGTGTCGGAG GTGGAGCTGG TTCAACCGAT ATCTTGATCT 1380

CATGGATCTA CCGTTTGACA ACAGGTACAT CTCCTCAATA CTCAATGGCG GCAGCTGTTA 1440

CCTTGATTAT CTCTATCATT GTCATCTCAA TCTCTATGAT CGCATTCAAG AAACTACACG 1500

CATTTGATAT GGAGGACGTC TAAGATGAAT AACTCAATTA AACTCAAACG TAGACTGACT 1560

CAAAGCCTTA CTTACCTTTA CCTGATTGGT CTATCAATTG TAATTATCTA TCCACTGTTG 1620

ATTACCATTA TGTCAGCCTT TAAAGCAGGT AACGTCTCAG CCTTTAAACT AGATACTAAT 1680

ATCGACCTCA ATTTTGATAA CTTTAAAGGC CTCTTCACTG AAACCTTGTA CGGTACTTGG 1740

TACCTCAACA CTTTGATTAT CGCCTTAATT ACCATGGCTG TTCAAACAAG TATCATCGTA 1800

CTTGCTGGTT ATGCTTACAG CCGTTACAAC TTCTTGGCTC GTAAACAAAG TTTGGTCTTC 1860

TTCTTGATCA TCCAAATGGT GCCAACTATG GCCGCTTTGA CAGCCTTCTT CGTTATGGCG 1920

CTTATGTTGA ACGCCCTTAA CCACAACTGG TTCCTCATCT TCCTCTACGT TGGTGGTGGT 1980

ATCCCGATGA ATGCTTGGCT CATGAAAGGC TACTTCGATA CAGTGCCAAT GTCTTTAGAC 2040

GAATCTGCAA AACTAGACGG TGCAGGACAC TTCCGCCGCT TCTGGCAAAT TGTTCTACCA 2100

CTTGTTCGCC CAATGGTTGC CGTACAAGCT CTCTGGGCCT TCATGGGACC TTTCGGGGAC 2160

TACATCCTCT CTAGTTTCTT GCTTCGTGAG AAAGAATACT TTACTGTTGC CGTAGGTCTC 2220

CAAACCTTCG TTAACAATGC GAAAAACTTG AAGATTGCCT ACTTCTCAGC AGGTGCTATC 2280

CTCATCGCCC TTCCAATCTG TATTCTCTTC TTCTTCCTAC AAAAGAACTT TGTTTCAGGA 2340

CTTACAAGTG GTGGCGACAA GGGATAATTT ATCCCCGCCA CCCTTTTTCA TTTTATACTC 2400

TTCGAAAATC TCTTCAAACC ACGTCAGCTT TATCTCCAAC CTCAAAGTTG TGCTTTGAGC 2460

AACCTGTGGC TAGTTTGCAC TTTGATTTTC ATTGATTATT AGCAATTGTC ACTGTAAATA 2520

ATATCCTTGT AGCAAGCAAT TTTTCTCCTA GACTTGAAAT AAAGCGCATT TCTCTATATA 2580

ATAATACTCA TATAGAAAAC ACCTTTTAGA AAGATACCTA TGCTTCCATA TCCATTTTCC 2640

TATTTTTCAA GTATTTGGGG GGTTCGTAAG CCCCTGTCCA AACGTTTCGA GCTCAACTGG 2700

TTTCAACTTC TCTTTACCAG TATCTTCCTT ATCAGCTTGT CTATGGTACC CATTGCTATC 2760

CAAAACAGCT CCCAGGAGAC CTATCCGCTA GAAACTTTTA TCGATAATGT CTATGAACCT 2820

CTGACAGATA AGGTTGTCCA GGATCTCTCT GAACATGCTA CAATTGTCGA TGGCACATTA 2880

ACTTATACTG GAACAGCTAG TCAAGCCCCT TCTGTTGTGA TTGGTCCAAG TCAAATCAAG 2940

GAATTACCTA AGGACTTGCA ACTGCATTTC GATACAAATG AGCTAGTCAT CAGCAAGGAA 3000

AGCAAGGAAC TGACCCGCAT CTCTTACCGA GCCATTCAGA CTGAGAGTTT CAAAAGCAAA 3060

GACAGCTTGA CCCAAGCAAT TTCTAAAGAC TGGTACCAAC AAAATCGTGT CTATATCAGC 3120

CTCTTCCTAG TTCTCGGTGC GAGCTTCCTC TTTGGTTTGA ATTTCTTTAT CGTCTCTCTT 3180

GGAGCTAGCT TTCTCCTTTA TATCACCAAA AGATCACGCC TCTTTTCATT TAATACCTTT 3240

AAAGAGTGCT ACCATTTTAT CTTGAACTGT TTAGGATTGC CGACTCTGAT TACACTTATT 3300

TTGGGATTAT TTGGCCAAAA TATGACAACC CTGATTACTG TACAAAATAT TCTTTTTGTT 3360

CTGTATCTGG TCACTATCTT TTATAAAACA CATTTCCGTG ATCCAAATTA CCATAAATAG 3420

GAGATTTTTA TGCCCGTTAC GATTAAAGAC GTGGCCAAGG CTGCTGGTGT TTCGCCTTCA 3480

ACCGTAACCC GTGTTATTCA AAATAAATCA ACCATTAGCG ACGAAACAAA AAAACGTGTT 3540

CGCAAAGCTA TGAAGGAACT CAACTACCAC CCAAACCTCA ACGCTCGTAG CTTGGTAAGC 3600

AGCTATACTC AGGTTATCGG ATTAGTTCTT CCTGATGACT CAGACGCCTT CTACCAGAAT 3660

CCTTTCTTTC CATCGGTTCT ACGTGGCATC TCTCAAGTCG CATCTGAAAA CCACTATGCC 3720

ATTCAGATAG CAACAGGGAA AGATGAGAAG GAGCGTCTCA ACGCTATTTC ACAAATGGTC 3780

TACGGCAAGC GTGTAGATGG GCTAATTTTT CTCTATGCCC AAGAAGAAGA CCCTCTCGTA 3840

AAACTCGTCG CAGAAGAACA GTTCCCCTTC CTTATCTTAG GTAAATCTCT ATCTCCTTTC 3900

ATCCCACTTG TCGACAACGA CAATGTTCAA GCTGGTTTTG ATGCGACTGA ATATTTCATC 3960

AAAAAAGGCT GCAAACGCAT TGCCTTTATC GGAGGAAGTA AAAAGCTCTT CGTGACCAAA 4020

GACCGTTTAA CAGGCTATGA ACAGGCGCTT AAACATTACA AACTTACCAC TGACAACAAT 4080

CGCATCTACT TTGCCGACGA GTTTCTGGAA GAAAAGGGCT ATAAATTTAG CAAGCGATTA 4140

TTCAAGCACG ATCCACAAAT TGATGCTATC ATCACAACCG ATAGCCTCCT AGCTGAAGGT 4200

GTTTGTAACT ATATTGCCAA ACACCAGCTG GATGTCCCTG TTCTCAGCTT TGACTCGGTT 4260

AATCCCAAGC TCAACTTGGC AGCCTATGTC GATATCAATA GTTTAGAGCT TGGTCGTGTT 4320

TCCCTTGAAA CTATTCTCCA GATTATTAAT GATAATAAAA ACAATAAACA AATTTGTTAC 4380

CGTCAATTGA TCGCCCACAA AATTATCGAA AAATAAGAGA CTGGGCAAAA AGTCGTTAAA 4440

AGCAAAAACG CATACTATCA GGTATTGAAA AAACTTGATA CTATGCGTTT TATTGTGGGA 4500

AGATTTACTT CCTTTTCTAC TGAAATTGAG TCTTTTCCCA AGATCTTTTT ATACTCAATG 4560

AAAATCAAAG TGCAAACTAG GAAGCTAGCC GCAGGTTGCT CAAAACACTG TTTTGAGGTT 4620

GTAGATGAAA CTGACGAAGT CAGTAACCAT ACCTACGGCA AGGTGAAGCT GACGTGGTTT 4680

GAAGAGATTT TCGAAGAGTA TTAATCACTA ATTATCTATC TCAACAAATC TTCCTAGAAT 4740

ATGAACATTT TCCGAGACAG AGACAAAGGA GCTTGGATCC ACTTGTGTCA TAATCTGTTT 4800

AAATTCATTA AACTCTGCAC GTGTAATGAC AGTGATTAAA ACTGCCTTTC TCTCGTGATT 4860

ATAGGTTCCT TCTGCATCGT GGATCATGGT TGCTCCGCGG TGCAATTTTT TATGGATTTT 4920

TTCAATTACC TTCTCTGGAT GATTTGTCAC AATCATGGCC TGCATACGCT TTTGCTTAGT 4980

AAAGACTGCG TCTGTCACAC GGCTAGAGAC AAAGATGGTA ATCATAGAAT AAAGAGCGTA 5040

TTTCCAACCA AAGGTCAAAC CTGCTATCAG CATGATAGTT CCATTTACCA AGAAAGAAAT 5100

ACTACCGACA TTCTTACCCG TTTTCTTACG AATAGTCAGG CTGACGATAT CCGTCCCACC 5160

ACTGGAGATA TTGTTTCGAA GAGCAAAACC AATCCCCAAA CCCATAACAA CACCCCCAAA 5220

AAGGGAATTG ATAATGGGAT CCTCTGTCAA GGTTGCCACA GGGACAAACT GGATAAAGAA 5280

GGAACTCATA GATACCGTGA TAAAGGTAAA GACGGTGAAC TTATGGCCAA TCTGATACCA 5340

AGCTAAGACC ATCAAAGGGA AGTTAATGGC GTAGAAGCTT AGCGAAATCG GAATATGAAA 5400

ACCAAACCAG TGATTACTCA AGGCAGAGAT AATCTGTGCC AGACCTGTTG CACCACTCGA 5460

ATACACATGC CCTGGTTGGA AAAAGAAATT AACTGCTACT GCTGATAAAA AACCATAGAC 5520

CAGAGAGGCC GAAATCTTCT CATCATACTT TTCTCGAGAG ATACTTTGTA AGACACGTAA 5580

AATTTTTATC TGATAAGCAA AGCGGCGCAG ATAATAGCGC CACCGCTTAA TTCGTTTTGT 5640

TTGTTTCATC TTCTTCTACT TGTAAGCTGA GTTCCTCTAG TTGTTTGAGA GCGACTGTTG 5700

ATGGAGCTTG TGTCATTGGG TCAGTTGCCT TGTTGTTCTT AGGAAAGGCA ATGACTTCAC 5760

GGATATTTTC TTCTCCAGCA AGCAACATGA CAAAACGGTC AAGCCCGATA GCCAAACCAC 5820

CGTGTGGTGG GAAACCATAG TCCATGGCTT CAAGAAGGAA ACCAAACTGG TCATTGGCTT 5880

CTTCAGTTGA GAAACCAAGA GCCTTGAACA TGCGTTCTTG AAGGTCTTTT TGGTTGATAC 5940

GAAGGCTACC ACCACCAAGC TCATAACCGT TCAAGACGAT ATCGTAAGCA ATGGCACGAA 6000

CCTTAGCCAA ATCACCTTCT AATTCATGAG CAGTCTCTTC CTGTGGAAGT GTGAAAGGAT 6060

GGTGGGCGCT CATGTAGCGG CCTTCTTCTT CAGACCATTC AAACATCGGC CAGTCAACCA 6120

CCCAAAGGAA GTTGAACTTA TCATTATCAA TCAAGCCAAG CTCTTTAGCA ATACGTCCAC 6180

GAAGGGCACC CAGTGTTGCA TTAGCCACTT CAAGCGTATC CGCCACAAAG AGAACCAAGT 6240

CCTTATCTTC AAGAACAAGC GCTGTTGTCA ATTCTTCTTG GATACCAGTC AAGAACTTGG 6300

CAACTGGTCC GTTTAATTCT CCATCAACCA CCTTGACCCA AGCAAGACCT TTGGCACCAT 6360

ACTGTTTGGC TACTTCCGTC ATCTTGTCGA TGTCTTTACG TGAATAGTTG TCCGCAGCTC 6420

CTGTGACCAC AATCGCTTTT ACAGCAGGTG CTTCTGAAAA GACTTTAAAG TCTACACCTC 6480

GGACCACTTC TGTCAAGTCC TGAAGCAACA TGTCAAAACG AGTATCTGGC TTGTCAGAAC 6540

CGTAAAGAGC CATAGCATCA TCGTATTTCA TACGAGGGAA TGGTAGCGTT ACTTCGATGC 6600

CTTTTGTTTC CTTCATCACG CGCGCGATCA AGCTTTCTGT AATATCTTGG ATTTCTTGCT 6660

CAGTAAGGAA GGACGTTTCC AAGTCGACCT GAGTAAATTC AGGCTGGCGG TCTCCACGCA 6720

AGTCCTCGTC ACGGAAACAT TTAACGATTT GGTAGTAACG GTCAAAACCA GCATTCATCA 6780

AGAGCTGTTT CGTGATTTGT GGACTTTGAG GAAGAGCGTA AAAATGCCCC TTATTAACAC 6840

GAGACGGCAC TAAATAATCA CGCGCCCCTT CAGGCGTTGA CTTAGAAAGG AATGGTGTCT 6900

CCACGTCGAT AAACTCCAAC TCATCCAAGT AGTTGCGGAT AGAGTGGGTC ACCTTGGCAC 6960

GAAGTTTAAG ATTTTCCAAC ATTTCTGGAC GACGAAGGTC AAGGTAACGG TAACGCAAAC 7020

GTGTATCGTC ATTTGCCTCA ATGCCATCCT TAATCTCAAA TGGTGTTGTC TTAGCTGTGT 7080

TAAGCACAAT AAGAGCTGTC ACGTTTAACT CAACCGCACC AGTTGGCAAC TTATCATTGG 7140

CTTGTCACGC GCAGCGACCT GACCAGTCAC CTCAATAACA AATTCGCTAC GAAGGcTTTC 7200

AGCTGTTGCC ATAACCTCTG CAGATACTTT TTCAGGGTTG ATAACCAACT GCATGATTCC 7260

TTCACGGTCA CGAAGATCGA TAAAGATCAA ACCACCAAGG TCACGACGAC GGCCAACCCA 7320

TCCTTTCAAG GTTATTTCTT GTCCGATGTG TTCCTCACGA ACACGACCAG CATACATACT 7380

ACGTTTCATT ATTTCTCTCC TCTTTTATTC TGTTACTATT TTACCATAAA AGCGCAGCTC 7440

TTCATGAAAA TCATCAGAAA AGTTTGCCAG TCTTTAAAAG TCAGGTGAAA GCCCTAAAAA 7500

TTAGCGCTAA TACTCTTCGA AAATCTCTTC AAACCACGTC AGCGTCGCCT TACCGTATGT 7560

ATGGTTACTG ACTTCGTCAG TTTCATCTAC AACCTCAAAA CCATGTTTTG AGCTGACTTC 7620

GTCAGTTCTA TCCACAACCT CAAAACAGTG TTTTGAGCAA CCTGCGGCTA GCTTCCTAGT 7680

TTGCTCTTTG ATTTTCATTG AGTATAATAC AAAAATCCGA TGAACTTCAC CGGACTCTTT 7740

TATTTTGAAT TTTTGCCTGC TTTACGCTTT TCAGCGATTT CGGCTGCCTT TCGAGGCAAG 7800

ACAATTTCCG TTATGTAAGC CGTCCCAAAA CGCAGTACAC CTGCAATAGG AGCAAAGACA 7860

ACTGCTAGAT AGTTATAGAA GAAATCGCCT TTGAAGGCAT AAGCTAGCGC TCCAATGATG 7920

AAAAATAGAA CGACTGCCTG AATCACTGCT AATAAAATTA CTCGTTTCAT GTGACCTCCT 7980

GACTCTATTA TAGCATGAGA ATCATCAAAA AGCCGACTAA ATTATTCAAA GCGTGAAGAG 8040

AAATACTGTA GACCAGACCT TTTCTGCTAA TGTAAGCCAA ACCCAAACTA AAACCAAGGC 8100

TAAAATAGAC AAAAAATTGT TGCACATCAC CTGGAAAATG AATCAAGGCA AATAGAAGAC 8160

TAGATACCAG AAGAAAAATC AGGGTTCGTT TACTATTGTC CTGCTTAGGA AAGAGATAGC 3220

GTGCTAACAT CCCTCTAAAA ACAATCTCTT CCGTCAAAGG AGCAAAAATA ACCACAGCAA 8280

AGAATGAGAA AAGTGGTTGA GACAAGGTCA AGTCTGTCGC TATTTGCTGA TTTACTGAAG 8340

GATCATCTGG CAAGAAGAAT TGAACGACCA GAGATAAGAA CCAAACCAAG ACAGGAAGCC 8400

AAATAAATCG ATTAAAGCCG CTCTTCTCAA TATGAACAGG AGCCTTCTGA TACCATTTGT 8460

AAATGCCGTA CACATATACT CCAGCCAAGG CCACATAGAG TAGAGTAACA GCATAGGGTG 8520

AAGCGCCTAA AGCAAGCGAC GCAGTCGCGA GCCCCTGAAT AAAGCCATAG ATAAATAAAA 8580

AGGATAGAAG GGCTAGAAGA ATCCAGCCAA GGTTTTTAAG TAATTTCATA GATAACTCCT 8640

TTATTTGAAA TAACGTTTTA CCATAGGTAA CTGCATCACA TTGATATAAA CATGGATGGC 8700

TCCTACAAGC AAGAAAGCTA GTAACTGAAT CTCTCCTGTC AAGAAAGAAA TGATAATAAG 8760

AAAAATATAT AAGGCTGGTA AGACATATTG GTGTAATTGG AATAAAATTC GAAAACTCTG 8820

TTCCAAATTA GCCTGACGCT CCCCTTCATC ATAAGAATTT ATATAGTTCA AGACATCCTT 8880

TGGTGTAGCG AAAAATTCCA AATCAAACTG ACGAACAATC GCAATGGTTT TAAAAAGAGA 8940

TTTTTGAGCG ACTAAGAATA CCACAAAGAG TAAGAAAGAA AGGAAAAATG TTTGAGGGTT 9000

TGTATGCAAT ATAATCACCT CACTTAATGA AATAAAAATA GCCAATGGAA TCGCTACACC 9060

TGTAATATTA AAAGCAATGG TTCCAAACTC AAGATTCCGA TACATTTGCA CATAATAGGT 9120

TTCATTCAGA TCGTCATCCA TTTCCTCTTG ATACAAAGAA TGAAATTTTC TGCTTTTCTT 9180

TAAGAAATTG AAAGTCAAAA ACATACTAAT GAAACCTATC AGTAAACAAA TAGCTGATAT 9240

CCATGGCATC AAGGCTTTTA CATCTAAAAT AATTTCGTGG GATTCGACAC GTGCCTTAAA 9300

CATCCCTACA AACATGCCCA AGAACCCCCC AAGACAATAG ACATCAAAAA TAACAATCTA 9360

CGTTTCTTTT TCATATTCAT TCTCCTTTTT CACTTGCTAG ATTTTTGGAT TTCTTTTCAA 9420

TCCATTCAAT TACTGGGATG AGAGCAAAGT AGACCCAAAC AAATTGGTCG CTTTGATAGG 9480

GATTAAACCA GCTTAGGTCC ATCCCAATCA GTAGAAATAC GCTGACTAAT AAAGCTATGA 9540

CCACTACATA ATAAATCACT TTATACTTGT TCATCACTCG TCCTCCTCCA AACGAAATAC 9600

CGATTCGACT GTTTCGTTGA AAATTTGAGA TATTTTCAGG GCAATGATAA TGGATGGGGT 9660

GTACTCATCC CGTTCTAGTA GGCTAATGGT CTGTCTGGAA ACCCCTGCCA GTTTGGCTAG 9720

GTCGGTTTGA TTGAGACCAT CGCGAGCTCG AAGCTCTTTT AGACGATTTT TTAGTTGCAT 9780

GTTACACACC TACTCTCCGT CAAATTCAAC GGTTTGGATA TCCTCAATAC GTTGCAACTT 9840

GAATTTTTCT TTTCCCGTAT TATCTACACG TCGTAGCTTT ACCCATTCCT CATCAACATC 9900

CACAACTTCC CAGTTATCTG GCCCAATATA CACTCCCGTT ATAATTGGTT CCTTTCCAAT 9960

CATTTCTTGT AATAATCTCG ACATTTCTGC GTTTCCTTTC TCTTTTCGCT CAAGTCTTTT 10020

GATTTTATTC TCTAGTTTCT TGATTTTTTT AGAATTATTA GAATAAAAGA AAATCATAAA 10080

TAGTATAAAT CCTAGTACCC ACATTATAAC TCCTTTCTGC TTCCTATTTC TTAACTTGAA 10140

TTCATTGTAA CATATCTTTT TCTTTTTGAC AAGTATAGTT GTCAAAAAAA TTATGATTTT 10200

TGTCATTTTG CAAAAGAAAA AGGTCAGGAG TAGGTTCCTG ACCACTTTAT CTATCATTAA 10260

TACTCTTCTA AAATCTCTTC AAACCACGTC AGCTTCACCT TGCCGTAGGT ATGGTTACTG 10320

ACTTCGTCAG TTTCATCTAC AACCTCAAAA CCATGTTTTG AGCTGACTTC GTCAGTTCTA 10380

TCCACAACCT CAAAACCATG TTTTGAGCTG ACTTCGTCAG TTCTATCCAC AACCTCAAAA 10440

CCATGTTTTG AGCTGACTTC GTCAGTTCTA TCCACAACCT CAAAACAGTG TTTTGAGCAA 10500

CCTGCGGCTA GCTTCCTAGT TTGCTCTTTG ATTTTTATTG AGTATAAAAT CCTAGTTTTT 10560

CAAAGATTTC TGAGAAGTTT TGGCTGATTG TCTCAAGTGA CACTTGCACT TCTTCTCGGG 10620

TTTGGTTGTT CTTGACCGTC ACTTGTCCGC TTTCGACTTC GCTCTCTCCT AGGGTGATGA 10680

GGGTCTTAGC CGCAAAGACA TCGGCTGACT TGAACTGAGC TTTTAGTTTA CGGTTGAGGT 10740

AATCACGCTC TGCTTTGAAA CCTTGTTGGC GAAGAGCCTG TACCAATTCC AAGGCCTTGA 10800

TATTTGCCCC TTCGCCCAAG ACTGCGATAT AGACATCTAG GGCGTTTTCG ATAGGGAGGG 10860

TCACACCTTG CTTTTCAAGG ATGAGAAGCA GGCGCTCTAC ACCAAGTCCA AAACCAAATC 10920

CAGCAGTTTC AGGGCCTCCA AAGTAAGCAA CCAAACCATC GTAGCGACCA CCCGCACAGA 10980

CGGTCAGGTC ATTGCCCTCA ATCTCTGTGA TAAACTCGAA AATGGTGTGG TTGTAGTAGT 11040

CCAGACCACG CACCATATTG GTATCGATGA TGTAATCTAC TCCAAGATTT TCCAACATCT 11100

GACGCACAGC ATCAAAATGA GCTTGGCTTT CTTCATCAAG AAAGTCCAAG ATAGACGGCG 11160

CATTCTCTAC TGCCACCTTG TCTTCTTTTT CCTTAGAGTC CAAGACACGA AGAGGATTTT 11220

CCTCCAAGCG ACGTTGGCTA TCCTTAGACA AGGTCTCCTT GAGCGGTGTC AAATAGTCAA 11280

TCAAGGCTTG GCGGTAGGCT GCACGGCTCT CAGGATTTCC AAGAGTGTTG AGGTGCAATT 11340

TGACACCTTG AATACCGATT TCCTTCAAAA AATGGGCTGC CATAGCGATT GTTTCCACAT 11400

CGGTAGCTGG ATTGCTAGAG CCAAAACACT CAACACCAAT CTGGTGGAAT TGGCGCAAGC 11460

GCCCTGCCTG TGGACGCTCA TAACGGAACA TAGGTCCCAT GTAGTAGAAC TTGCTTGGCT 11520

TTTGCACTTC TGGGGCGAAA AGTTTATTTT CCACATAGGA ACGGACAACG GGTGCAGTTC 11580

CTTCTGGACG GAGGGTAATA TGACGGTCAC CCTTGTCATA AAAATCGTAC ATTTCCTTGG 11640

TTACGATATC CGTTGTATCT CCGACAGAGC GACTGATAAC CTCGTAATGC TCAAAAATAG 11700

GCGTGCGCAC TTCTGCATAG TTGTAGCGTT TGAAAATCTC ACGGGCAAAG CCCTCAACGT 11760

ACTGCCACTT AGCAGACTCA GCAGGTAAAA TATCCTGCGT TCCTTTTGGT TTTTGTAATT 11820

TCATAGGGAA TCCTCTTTAA ACTTAATAGT CTTATTTTAC CATAAATAGA GGGATTAAAA 11880

CAGTAAGAAA AAAATTAGGA TTTAGATATC ATTTTTGAGA TTAAGAATTG TCAAAAAAAT 11940

AGCTAGCAAG GAAAGACCAA CAAATAGCAT CCAAGTCAAC TGTATATTCC ATACGGCTAC 12000

TAGTGAAAAA CAAGCTGTTC CCACAGGTAT GGATAAGGTA AACAATAGAC CTAAAAAATT 12060

ACTAGTACGA GCTAGAACCT CTGGAGCTAG ATTTTTCATG AGCATGGCAC TAATCTTTGG 12120

TTGAACTTTA CCAGACACAT ACAGAGTAAA GAAGAGAAAT AGCAAACCAA GCACGACTTG 12180

ATTGAATAAA TTAGCCAAAC CAACTAGACT AAGTCCTACG GTCTCCCACA TCATCAATCT 12240

AGGCAAGGAC TGCTTCCCAA AATAATCATT GCCCGTAAGG CTACTGATGA TGACTGATAC 12300

TAAAACACAG AATTGATTGA TAAATAGTGC CTCTGTATAA GAAAAATTCA AGAGAGAATG 12360

GCTCAAAAAG AAGATATTAT AAATTCCACC CAAAGCGCCA CCCAAGGAAT TAATAAGCAA 12420

GACAGCAAAG AGCATAAAAC CAAAGTTTTT CTGTCCACTT TTAAGAAAAA CGAGACGTAA 12480

ATTTCGGTAA ATTGTTAGGA ACTGGTCTTT GATAGAAAGC TTCTCATTTT TTAAGTTTTC 12540

ACCATCAGCA GATGACATTG ACAGGCTCAA TTTGCTTTTT CCTAAAAAGA GGATAGTGGC 12600

TGATACTAGG AAAAAGCAGG CATTGATTCC CGCAACGAGA GAAAAATTGT TGACCGATAG 12660

AGCTAAGAGC CAGACTCCGA AAGCTTGACC ACCAATAGCT GAAATATAGG TGATGAACTG 12720

TGAAAAAGAA TAAGCCTCCA TCAGATCATC TTCAGCTACT TTTTCCTTAA TAAGAGGCAT 12780

ACGCAGGCCA CCTGCAAAAT CACTGATGAT ATCACTAATG ACATTGATCA AACACAGGCT 12840

AGAAAAGGCA AAGAGACTAG CTTGCTGAAC AACTAGGGCT GCTAGAAAAA ATAGAACCGC 12900

CTGAAACAAA CCGCTATAGA CCATCCATTT GACCTTGTCC CTCGTGTAAT CTGCCCGAAT 12960

CCCTGCAAAA ACTGTAAAGA GGGTCGGAAG AATCATGACA ATATTCGCCA TAGCAACAGC 13020

AAAAGATGCT TGTGACAAGG TCGATGCATA GACGATAAAG ACCAGGTTGA AAATCGAAAC 13080

ACCAAAAGCA TTGAAGAAGC GTGG 13104

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19250 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

CCGGGCAAAT AGTTTTGAAC TTTTCATCAT TTTCTCCTTT AAAACTTTCT CTCCATTATA 60

GACTCTTTTC AGAAAGTTGT CAACAGAATT TTCAGAATTT TTGAAAATTA TTTTTCAAAC 120

AACATCTTTG CAAAAAATAT GAATATCGTA AGCGCGTCAT AACAAGGTAT CTATCATTCA 180

TGGAGCTCCT CCTGTATACT ATTAGTAAAG TAAATATTGG AGGATATTTT AATGCCACAA 240

CCTATTGTTC CTGTAGAGAT TCCACAATCT CGTCGTTTTG ATTCTAAAAA GAGAAATGAT 300

ATTCTrCTTA AAATTCGTAT TGGCAAGCTT GAAGTAAGTT TTTTTCAATC TCTCAATCTC 360

GAAATGATAG AACAGCTTTT GGATAAGGTG TTGCTCTATG ACAATTCATC TATCTAGCCT 420

AGGGCAGGTC TATCTCGTGT GTGGGAAAAC TGATATGAGA CAAGGAATCG ATTCACTGGC 480

TTATCTCGTT AAAACCCACT TTGAATTGGA TCCTTTCTCC GGTCAAATCT TTCTCTTTTG 540

TGGTGGACGT AAAGACCGCT TTAAAGTCCT TTACTGGGAT GGTCAAGGAT TTTGGCTACT 600

ATATAAACGC TTTGAGAACG GCAGACTGAC TTGGCCCAGT ACAGAAAAGG ATGTCAAAGC 660

TCTCGCACCT GAACAAGTAG ATTGGCTGAT GAAAGGCTTT TCTATCACTC CAAAAATATA 720

GTAGATTGAA ACTAGAATAG TACACCTCTG CTTCTAAAAC ATTGTTAGAA ATCGATTTTA 780

CTGTCCTGAT CGATTTGTCC TGTTATTATT TCATTTTACT ATAAATCCAT CAGAAAGTCG 840

TGATTTCTAT TGAAATGAGG ACTTTCTTTT TATACTCATC TGCTTTCAAA AAGCACTCTA 900

GTCCATCTCC GATTAACGAT GGACTTTATC ACCTCCTTCT CCAGTCCTTG TATAACATCT 960

TGAAGTTGAT TCATGACATC TTCCAAAGTT CGAAAGGCTT TATTCTTAAA TCCACGTTTA 1020

CGAATCTCTT TCCACACTTG TTCAATGGGG TTCATCTCTG GTGTGTATGG AGGAATAAAT 1080

GCAAAGCCAA TATTAGTCGG AATCTTTAAG GTACTTGATT TATGCCATAT AGCATTGTCC 1140

ATAACGAGTA AAAGATAATC ATCTGGATAA GCTTGTGAAA GCTCCTATTC CTAAAGCCCC 1200

TTTATAACCT CTTGCGAGAG AGACTATTGA CTCAGCCCTT ACTTCATGCG GATGAAACCT 1260

CCTATCGGGT TCTAGAGAGT GATAGCCATC TGACCTACTA TTGGACTTTT TTGTCAGGTA 1320

AAGCAGAGAA ACAAGGGATT ACGCTTTACC ACCATGATCA GTGTCGAAGT GGTTCAGTAG 1380

TACAAGAATT CCTAGGAGAT TATTCTGGCT ATGTTCATTG TGATATGTTG CGGCAGTAAC 1440

TTAGGACTTT AGTCCTCTAG TTCTGCCTAT GCGATAGCAG TCCAAGGTTT AGGAGTAAGG 1500

CGACGCTAAG CTTGGTAAAC TGCGAACAGC TAGAAGCTTA TCGTCAACTG GAAGAAGCTG 1560

CACTTGTTGG ATGTTGGGCG CATGTGAGAA GGAAGTTTTT TGAAGTGCCC CCCAAGCAAG 1620

CAGATAAATC ATCCTTAGGA GCTAAAGGTT TAGCCTATTG TGATCAGTTA TTTTCCTTGG 1680

AAAGAGACTG GGAGGCTTTG CCAGCTGATG AACGGCTACA GAAACGTCAA GAACATCTCC 1740

AACCCCTACT GGAAGACTTC TTTGCTTGGT GCCGTCGTCA GTCAGTTTTA TCGGGTTCAA 1800

AACTAGGAAG GGCAATTGAA TACAGCCTCA AGTATGAAGA AACCTTTAAG ACCATTTTAA 1860

AAGACGGACA TCTGGTCCTT TCCAATAATC TAGCTGAACG CGCCATTAAA TCATTGGTTA 1920

TGGGACGGAG TAAAAGAGTC CAGTGGACTC TTTTAGCCTA AGCTCAGTTT AAAAAAACGA 1980

GGGTGGTTAT TTTTAAAAAA GCGAGGGTGG TTATTTTCTC AAAGTTTTGA AGGAGCTAAA 2040

GCAAGAGCTA TTATTATGAG TTTGTTGGAA ACAGCTAAAC GTCATCAATT ATAGTGCGTT 2100

GAATCTATAA CAGTACGCAT CGACTGCTAA AATATTTCTA TAAATCAATT TTCCTTTCCT 2160

AATCGATTTG TTCATATCTT ATTACAATCC ATTATAAATA GCGAGAAATA TCTATCCTAT 2220

CTTCTAGAAT GTCTTCCAAA CGAGGAAACT CTCGTAAACA AAGAGGTTTT AGAGGCCTAT 2280

TTACCGTGGA CTAAAGTTGT ACAAGAAAAG TGCAAATAAG AAATCTCCAG ATTAGGAACT 2340

ATATATGAGT TCTCTAGTCT GGAGATTTTT CAATAGACTT CGTTATTGGG CGGTTACTTT 2400

CGAAACTTTG AAAACTTCAA AAAACGGATT TTTATCGCTC TGAACATCAA AAAAGAAAGG 2460

ACGAAATTTG TCCTTTCTCA AGCTTAGCTT TTCTTCAACC CACTACAGTT GACAAAGAGC 2520

CCTTTATTCT ATCAAACATG AAGCGCAAAA ACAAGCCAAA AATCCGATAG AATGGCTATC 2580

CCTCGACTAT CAAGTAAGAC ATTTCCATCA AATACGTTCA ATTTTACTCT TGTTCTACTA 2640

AGAATTAATC ATCTCGTTTT GATTTATTAA AAATATACAA TTCAGCTTTT CCTCCAAACT 2700

ATTTTATCCA CTATCCCTGT ATAGCTCTGT ATTATCTTAA CAACTTTAGT AGAGACATTT 2760

TCCTCAACAT AATCCGGAAC CGGTAATCCA AAATCCTCAT CTTGTGCCAA GCTAACAGCA 2820

GTTTCAACTG CTTGAAGAAG AGAATTTTCA TCAATGCCTG CCAAAATAAA TCCTGCCTTA 2880

TCTAAGGACT CAGGACGTTC TGTACTTGTA CGAATACATA CAGCGGGAAA AGGATAACCT 2940

TGACTAGTAA AGAAACTACT TTCTTCCGGT AAAGTTCCCG AATCAGATAC TACAACAAAT 3000

GCATTCATCT GTAAACAATT ATAGTCATGG AATCCTAGTG GCTCATGCTG AATCACACGT 3060

TTATCTAGTT TAAAACCGCT CTCTTGTAGC CTTTTCTTTG ATCTAGGATG GCAAGAATAT 3120

AAGATTGGCA TATTATACTT TTCAGCTAAT TGATTAATTG CTGTAAAGAG AGAAATAAAA 3180

TTTTTATCTG TATCAATATT TTCCTCACGG TGAGCTGAAA GTAAGATATA ACCTCCTTTT 3240

TTCAATCCCA AACGTTCATG GATATCTGAA GACTCAATAG CAGATAAATT TTTATGTAAC 3300

ACTTCTGCCA TAGGAGAACC AGTTACATAT GTGCGCTCTT TAGGTAAACC ACACTCATGT 3360

AAATACTTAC GTGCATGTTC AGAGTATGCT AAGTTAACAT CTGAAATAAC ATCAACAATC 3420

CGACGATTAG TCTCTTCCGG TAGGCACTCA TCTTTACAGC GATTGCCAGC CTCCATATGA 3480

AAAATTGGAA TATGTAAACG CTTGGCAGCA ATAGCTGATA AACAAGAATT TGTATCCCCT 3540

AAAATCAATA AAGCATCTGG TTTAATTTGA TTCATCAATT TGTATGAAGT ATTAATAATA 3600

TTCCCTACAG TAGCACCAAG ATCATCTCCA ACAGCATCCA TGTATACGTC CGGAGTGTCT 3660

AACCCTAAAT TATCAAAGAA AATACCATTT AAATTGTAAT CATAGTTTTG TCCAGTATGT 3720

GCCAAAATAA CATCAAAATA CTTTCGACAT TTAGTGATAA CACTACTTAG ACGTATAATC 3780

TCTGGACGTG TTCCCACAAT AATCAATAAC TTAAGTTTGC CATTATCTTT AAAGTGAATA 3840

TCACTATAAT CTGTCTTAAT TTTCATTTAT TTCTCCACTT GTTCAAAAAA AGTATCTGGA 3900

TGTCTAGGAT CAAATGACTC ATTAGCCCAC ATGACAGTAA TTAGATTTTC TGTATCAGAA 3960

AGATTAATAA TATTATGTGC ATAGCCCGGT ATCATATGTA TTGCTTCAAT CTTATCGCCC 4020

GACACTTCAA AGTTCAGAAT AGGATACTCT TGACCGTTTT CATCCAGCCC TATCCTACGC 4080

TCTTGTATTA AAGCACGACC AGAAACAACC ATGAAAAATT CCCACTTAGA ATGATGCCAA 4140

TGTTGCCCTT TGGTAATGCC AGGTTTAGAA ATATTAACAG AAAATTGACC CGTATTTTCT 4200

GTTTTTAATA ATTCCGTAAA ACTACCTCGT TCATCTATAT TCATTTTTAG AGGAAACTTA 4260

AACTTATCTA CTGGTAAATA AGATAGGTAG GTAGAATACA ATTTCTTTTT AAACGATCCC 4320

TGAGGAATTT CAGGCATAAC TAAACTATCA GGCTGTTTTT TAAATGTTTC TAATAGAGAG 4380

ACAATCTCTC CTAAGGTTGC ACGATGAGTC GTTGGTACGT AGCAGTAGTT TCCTGATGGG 4440

CTAGGTAAGA TTTGTAATCC ATCTAGATTA CAACGATGAG GATTTCCTTC CAATGCAGTT 4500

AGACACTCTT GTATCAAATC ATCAATATAC AGCAACTCCA ATTCTACACT TGGATCATTT 4560

ACTTGAATAG GTAAATCGTG AGCTAGATTA TAACAGAAAG TTGCTACAGC AGAATTGTAG 4620

TTAGGACGGC ACCACTTCCC ATAAAGATTC GGGAAACGGT AAACTAAGAC AGGTGCTCCC 4680

GTTTTCTTTC CATATTCAAA GAAGAGTTCT TCCCCTGCTA GCTTAGATTG TCCATATATA 4740

GAGTTTGAAA ATCGGCCTTC TAAACTAGCT TGAGTAGAAC TTGAGAGTAG AACAGGACAA 4800

GTGTTTTCAT ACTTTTCTAA AATCTCCAAT AATCTACTTG AAAAACCGTA ATTTCCCTCC 4860

ATGAATTCAT CAGGATTCTG TGGACGATTG ACACCAGCTA AATGGAATAC GAAATCGGCC 4920

TTCTTACAAT ATTCATCTAA TAAAATCGGA TCTGTATCAC GATCATACTG AAAAATCTCT 4980

CCAATCTCTA AATTAGGACG AGTCCTATCT CGTCCATCTT TCAAAGCTTC CAGAGTACAG 5040

ATAAGATTTT TTCCTACAAA TCCTTTCGCT CCTGTGATTA AAATATTTTT AATCATGCCC 5100

CCTCCTTATT TTATATGCTG TTTTAATAGT TAACTCTCTC GACAATACAT GATACATTAT 5160

ATATCCTTGA TAATTTTAAT GTATCTTAAA AGATTTTACA TCTCTTCGTC TGCTACCATA 5220

TCACGAATTG CTGTCTGTAT TTCATCTAAT TCTAGCAACT TTCTTTTAAC TTGCTCTACA 5280

TCCATCAAAT CGGTATTATT ACTATTGAAT TCTGTCAACA AATTTCTATT CGTACTACCA 5340

TCTTTGAAAT ACTTATCATA GTTAAGATTA CGATTATCAC TAGGAACTCT ATAAAAATCA 5400

CCCAAATCAA TTGCATTTGC GCACTCTTCG TTAGTTAATA GTGTTTCATA CCTTTTTTCT 5460

CCGTGTCTAA TACCTATAAT CTTAATATCT TGTTCTGAGG CAAAAATTTC TGATACAGCC 5520

TTAGCCAACA CTTCAATCGT ACATGCTGGT GCTTTCTGAA CTAGTATATC TCCAGATTTC 5580

CCTTCTTCAA ATGCAAATAA AACCAAGTCT ACTGCTTCTT CCAATGTCAT CACAAAACGT 5640

GTCATGCTAG GTTCAGTAAT TGTAAGAGCA TTTCCTTGCT TAATTTGCTC AATCCAAAGA 5700

GGAACGACAG ATCCACGGCT ACACAGAACA TTCCCATAGC GAGTCACACA TATCTTTGTA 5760

TGCTCAGGAT TTACCGTCCT GGACTTAGCA ACAGCAATCT TTTCCATCAT AGCCTTGGAT 5820

GTTCCCATAG CATTGACAGG ATAAGCCGCC TTATCTGTAG AAAGACAGAT AACTTGCTTT 5880

ACACCAGCTT CGATAGCCGC AGTGAGGACA TTCTCCGTTC CCAAAATGTT AGTTTTTACC 5940

GCTTCTACAG GGAAAAATTC ACAAGAAGGT ACTTGTTTAA GAGCAGCAGC GTGAAAAACA 6000

TAATCCACAC CATGCATAGC ATTTTTTACC GAAGCTAAGT CACGCACATC TCCAAGGTAA 6060

AAACGGATTT TCCCAGCCAC TTCTGGTACT TTTACCTGAA ACTCATGACG CATATCATCT 6120

TGTTTCTTTT CATCTCGCGA AAATATACGA ATCTCTGAGA CATCTGTTTC TAAAAAACGC 6180

TTGAGAACCG CATTCCCAAA TGAACCTGTC CCTCCTGTAA TTAGGAGAGT TTTTCCTGTA 6240

AATTGTGACA TATATTACAC TTCTCCTTCT AGTATGTCTG CAATTTTCTT ACAAGCCGTT 6300

CCATCTCCAT ATGGATTTGA AGCTTGACTC ATTGCTTGAT AAACTGAATC ATTTTCTAAT 6360

AATTCTTTAA AATGCCTATA AATATTATTT TCATCAGCAC CTACAAGTTT CAAAGTCCCT 6420

GCTTCAATTC CCTCTGGACG TTCAGTTGTA TCTCTCATAA CCAAAACAGG TTTTCCTAAA 6480

CTTGGAGCCT CTTCCTGAAT ACCACCACTA TCTGTTAAAA TTAAATAACT TCTTGATAAA 6540

AAATTGTGAA AATCTAATAC TTCTAAAGGT TCGATCATCT TGATACGTTC ACAGCCACTT 6600

AGTTCTTCCT CAGCAATTTG GCGAACACGA GGATTCATAT GGATAGGATA AATAGCCTTG 6660

ACATCTGAAT ATTCTTCAAT AATCCTTCTA ATTGCTCTAA ACATATGTCT CATCGGTTCA 6720

CCAAGATTTT CACGACGATG AGCTGTAATT AGAATAAACC TGCTTTCTCC TATCCATTCT 6780

AACTCAGGAT GCGTATAGTC CTCTTGAATT GTAGTTTGTA AAGCATCAAT CGCCGTATTA 6840

CCTGTCACAA ATATGCTCTC TGGAGTTTTT CCTTCTCTTA AAAGATTATC TTTTGAAAGT 6900

TGTGTTGGTG TAAAATGATA CTGAGCCAAA ACCCCAACTG CTTGACGATT AAACTCTTCA 6960

GGATATGGTG AATAGATATC GTAAGTGCGC AAACCAGCTT CAACATGACC AATTGGAATC 7020

TGTAAATAAA AGGCCGCCAG TGAACTAGCG AAGGTCGTAC TTGTATCCCC ATGAACTAAC 7080

ACCAAATCAG GTTTTTCTGA CTCTAAAATA GCCTTCATTC CTTCCAAAAT GCCAATGGTC 7140

ACATCAAATA AAGTTTGTTT ATCTTTCATA ATAGACAAAT CAAAATCGGG AATAATCCCA 7200

AATGTGTCCA AGACCTGATC CAACATTTGA CGGTGTTGGC CCGTAACGCA AACTAATGTT 7260

TCAATATTCT TACGTGTTCT TAACTCTTTG ACCAAAGGAC ACATCTTGAT GGCTTCTGGA 7320

CGAGTTCCAA ATACTACAAC TACTTTTTTC ATATATTTAC TTACTCCTAA CAAATAATGA 7380

ACGGTTCTTA AAATAAATTA GATAACGGCT AATCCATAAC ACCACCTCAG ACATACTTGA 7440

ACAAATAGCT AATGTTACTA AACTAAAATT ATCAGACAAG ATAAATATTC CTAATCCCAA 7500

AGTTTGGACA ATCGAAGCTA ATATAGTTGT CATTGTAGTT TCTTTCACTT TATCAATAGC 7560

TCCTAAGACA GGCCATCCGT AAATCATAGA ATAAAAACTA GCAACAAAAG CGGGTAATAA 7620

GTACTTAAGA AAATCTGCTG AAACGGTATA TTTTTCACCA CCAATTATAG AAAGAATTTG 7680

ATTTGAAAAG AATAAAACTA TCAAAACTCC AAAGATAATA GGAATAAACA TAATCCGATT 7740

AATACTCTTA ACCGATTGTA TATCTTTAGT ACGTATCATA TGCGGATATA AACTATTCGC 7800

TATAGGATTA TACAATGATT TTGCTGCTGA AAGCAGTTGC ATTGCTATCC CCCAAAAGGC 7860

TATCTCTTGA CTTTGTAAAT AAAAACCCGA AATGACTGTC GTAAAGACGC CAAAAATAGT 7920

AGTTGCAAAA TTGGATAAAA AATAAATAGA GGATTCCTTT AAATCTTTAA CCCAAACAGA 7980

CAGATAAGAA AATGATAATT TAATTCCATA ATAATGAAGG AATCTATAAG AAACTACTGC 8040

AGCAACTAAA TTCCCAATTC CTTCCAATAT AGGAATCCAT AAAATAGAAG AATCATCTTT 8100

TACTACAATA AATGTCAAAA TTGTAATGAT AGTTTTAGAA ATAATATAAG GAATTGCAAC 8160

TGCATGCATC TTTTCAATTC CACGAAATAA AAAGTCAAAG ATAAAAATAT TGGTCACTGT 8220

AGCTAACAAA TAAAAAACTG AAAAAAGAAT ATTCTCTCTC ATTATTGGGA TTTGCCACAT 8280

CAATATGGTG TAAATTAGAA TCGAAATGAT AGATAAAAAT ATTTTTTCAA CTAGAGTATC 8340

TCCAACTATC CTTCCAATCT TTGAGGGAGT AGTACAAGCA TTTACAATAT TTTTTGTAGC 8400

TGATATCATG AAACCAAAAT CAATCACCAG TTGAACATAA GCTATTAACG CTTTAACATA 8460

AATAACCATT CCATACGCGT CTAGCGAAAG CACCCTTGTC AAATACGGGA GTGTTAATAA 8520

AGGAAATAGT AATTTAACAA TATTCAGAAT ATAGAGAGAA CTTGTATTTT TTATAAATGA 8580

AATTCTATCA ACTTTCACGA ACTAGTCCTT CCAAAAAAAG ATCTAAATAG TCCAAACTAC 8640

TTCTCGCTTT CAACACCAAT TCTGAAGGTA TTGTTATCGG TTTTAGATGA AAAGTTTCAA 8700

GTTTCTTTAC AATACTATTA ACACTTGAAT CAAATAAAGA TTCACAACGT TGTAACTCTC 8760

CAATTGCTCC ATAATAACGT GCTGTTTTTT CTGGATGGCA TGCAATGGCA ATCACAGATT 8820

TATTAAAACA TGTTGCCACT ACCCCAACAT GTAATTTACA AGTTAAAACC ACATCTACCA 8880

TTTTCAACAA TGATGTCATT TCTGCAGGAG AATGATACTT GAATTGAAAA CAATCCTCAG 8940

TTCTAACTAA TTTTCTAAAT TCCTGATAAT AAGCATCTTC ATAAGGTAGA ATGGAATCCG 9000

AAGTTACTAC AACATAATAG TTAGGATTGT TTTCTAGAAA AAGACTAATT GATTCCGCAA 9060

ATTTTTCAAG AGCTTTTTTG GAATGATTAT AGTGAACAAG AATTATCTTC TTATCTTTAG 9120

CTTCTCTTTT CAATTGACAC AGCTGCTCTG TTTTTTCTTC TCTTAATTTA CTTGAAATAA 9180

TTAAATCAAA GGTTTCATGC ACTGGAGCCG AAGGCGACAA ATGCTTCAAA GAATCAAATG 9240

ATTCTCGATC ACGAACTGTA ATAAATTGAG CATGATTAAT AATTCTCTTT ATACCATAAT 9300

TCATCAAAGA ATCGTTATTA GGCCCTGCAC CAATACCTAA TACTCCTATA GGCTTTTTAA 9360

AATATGAAGC CCAAATTCCC AAAGGTAAAA ATCGTTTAAA TTGGATTAAA TTATCACGAA 9420

AACGTGCATT ATGCCCTTCC CCAAAATATC CTCCCGGGAT ATACAAAATA GCATCTGCTT 9480

GTTTTTTAGT AAAACTTTGT TTTTGGCGAT ATTCTTTCAA GTACATTTGA AAGAAATCTG 9540

ATGGATTATA AAAAGAAACT TCATATCCTT TAGATTCTAA TAAATCATAG ACAATCTCAC 9600

CGTAAAGATA ATCACCGTAA TTACTTGAAC CATAATCCGT TGCACCATGT AACATAATTT 9660

TTTTCACCAC TATTTTTTCA ACCTCCTAAA AATAAATATC ATAATCAAAC TATACATAAT 9720

AGGACGATAA ACATCTATTG AACTACTTCT CACTAAAAGC AATAGTTGAG AAATTACCGA 9780

AAAATAAATA ACTTTTGAGA TTTTACTTGT TTGAAAAGCT CTGAAATTTA ATCGCCATCC 9840

ACTAAATATT CCCAAAACAA AACTCCAAAA AACACCACCA TAGTAACCAA AGTTCCAAAA 9900

TAATTCTTCC ACAAAAGAAG AGCCTACAGG TAACCCCAAA AATTTATTAA TAACAACCGT 9960

CGCTGATGCT TTATCAAAAA AATCACCAAC TAACCATCCA ATAGGAAAAA TTGATAGGAT 10020

AGTGCGTAGA AATGTCATCC CATATTCATA TGGAATGCTA CTAGGCACAA CAGTTACAGC 10080

AGAAGCTACT GTTAGGCTGG TCAGTCCCGA CTCTGAAAAT ACTTCCCCTA GTATATTCTT 10140

TACAAAATCT AATGAAGAAA AGGAATCAAA TAAGTATATA CCTATAGTAT TCAAGTCGAA 10200

ACGGTGCCCC CTAATAACAA CTAATACATT TAATAGAAAT ACAGTTACTA TTAAAAATAC 10260

AAGTACTCTT TTCTTCGAAA AAGTAATCCC TAAAGATTGT GTGTATACTA AAACCAACGC 10320

CAAGATTGAA AACACCTGGA TTTTACGACT TCCTGTTAGG ATCATTATCA AAATTAGGTA 10380

AAACAACATT ACCCAAAAAA TAGTACGCTT TATAACTCGG GACAGCTTAT CTGAATAAAA 10440

CAAGGAGAAC ACACCAGGAA GCATAAGTAC TCCTAAATCA TCTATTATTC CTGAACTAGC 10500

TGCCTCTGAA TATGCTGAAT AGCTATTCGC CGCTCTAACT GCTAGTACTG TTTTAGAATC 10560

AGTTATTACC CTAGAAATAA AGCCCACTCC TGTTAAAATC CTACCCGCAT TGTACAAAAT 10620

TTTCTCTTCA TTTTCCTGAT AATTTTGTAC TTCTGAATGA TAATGTACCT TTCCATCACT 10680

ATAAAAAAAT AAATAGCCTA CAGAATAACA AAACAAAATC CAAATTATAA AAATATATGA 10740

ATGAAATAAT TCTTCATTAT TATAGAAGTT ACTAGGGCTC CACAGCAGAG TTGTTTGAAA 10800

CCCCATATAC TCATTGAAAA TTAATCCAAA CATAAAAAAA TAAGATAAAA TCAGATACCA 10860

TACAGAAAAA TCATATATAC TAACTTTTTG TAAAATAAAA CCAGTAATTT GAAAAATAAT 10920

TAGAAAGCAA ACCCATATAA ATATAGACGG AACATAATTA GATATAAGAA AACCATTATT 10980

CCAATTATCG AGAGTCCAGA ACAAGTAACA GAAAGCAAAT ATAAAACTTA ATGTCACTAG 11040

TGTCACTCTA CAAATATACT TTGTCTGCAT CTATATCTCC TTTATTACAC ACATTTCTTG 11100

ATAACGATTC AATAATTTAC TAGCTTGATA ACAAATATCA TAGAGTCCAT CTGTCATACT 11160

GTTATTTATT TCAAAACGAT TGCATTCCTC AGATGTTAAA GACAGTACTT TATCTTTCCA 11220

TAGCAACACA GACTCTTCGT TGATAGGTAA GTAACTAATG TTTTTGGTCA CATCTACTTC 11280

TTGCGTCACT GTATCTGACG ATAAAATTTG TAATCCCGAT GCCTGAGCCT CTACTAGAGA 11340

AACAGGCAAC CCCTCATATT TAGACGGAAG CAAAAAAACA TCCATCGCAG ATAATAAATC 11400

AGAAATATCA GTCCTTCTCC CTAAAAATAG CACATATGGG GTCAGATTTA GTTCTAAAGC 11460

TTTCTGTTTT AATTTCTGCT CATCCTCACC ATTACCAACT AGGAGTAAAA TAACATTTGG 11520

TTTGATTAAA ATGAGTTCTT TTAAAACGTT AAATAAATAA CTTTGGTTTT TTTGATCTGA 11580

TAGGCGAGCT ATATTTCCTA ATACGAACTT ATTTGACACA TCTAATTCTC TACGACATTT 11640

TTCTCTAACA TCTGACAAAA ATTGATACTT TTTCAAATCA ATTGCATTAA AAATAATTTC 11700

AATTTTTCCG TCTTTATACG CTTTCTCTCC ATATAACCAC TTAGCCGAAT CTTCCCCACA 11760

TGCAAACCAA TGAGTTGCTA AGATTTTTAC CAAAATTGTT ACTAATTTAC GCAATACTTT 11820

TTGAAAACTG TTTTCTGTTA CATAAGCCAT ATGACTATGA ATAATTCTAA TTTTACAACC 11880

AATTATTTTA GATAAGATCA GACCAATTGC AGATTTATAG CCATGGCAAT GAACTATATC 11940

ATAATCTCCT TTCTTTATTA TTCTAGCAAG AGAGAGAAAC TGATGTAGAG GCTTTTTCCT 12000

TAATAGAGGC ACATGATAAA CCTTTGCACC CAATTCTTTC ATTTTATCCT CTAAAAATCC 12060

TTGTTCTTTT CCAGGCACAA TAAAATCAAA TTGAATTTTT TTTCTATCAA TGTGAGAATA 12120

ATAGTTGAAT AGAAAACTTT CTACTCCACC ACTATCTAGT GTTGTAAATA GATGTAATAC 12180

TTTAATCATT CTTCTTCCTT AAGCTTAAGA TTCGCTTCTC TAATTCTATT TCTGTTTTTT 12240

GTTTTTCTAA ACTAATTCTG TCCATGAAGT TATCACAATT CTTAATTAGC TGTTTCCTGT 12300

CAAGGTTTTG AATATACAAA GCCAAACAAT CTTTTTCCGA TTCATCCTTC ATAGGTAAAA 12360

CGAAACCAAA ACCATTCTCT ATTGACACTT TTTCCATATA AGTATCTTCA CAAACTAAAA 12420

TAGGTTTATA CAACAATGCA GCAAAGTAGA GTTTATTAGA CAAAGCATAG TCTAGTAAGG 12480

GAGTGTGATT CCCGTATAAA TTCAAAACAA CATCTGTATT CTTATAAAAA GACATGGTAT 12540

CTTTAGGCTG GAATGTGTCC ACCAAGTTAA CATTGCTGAT ATTTTTTTCT TGACAAAATT 12600

CCCTTAATTC TCCTGCATTA GTACCTATAA AATTCAACTG AAATCGACTG TCATTTGCAA 12660

AAAAATCGAT TATTTTTTTA TTTTGTTCTT GAAAACGAAT TAAACCAATG TAGGAAAGTT 12720

GAATTGGAAA CGTACTATTA TTTTTTAACT GCTTTACCTC GTTTAATTCT ATCATATTGG 12780

GTAGGTTATG GGTAGTAAAA TACTCTCCCA TTGGTAAAAA AAATTTATAG CCGTCTGAAG 12840

AAACGATATT CATTAAAGAA TTTTTCACCA ATTGTTTCTG AACCAAACGA TAAACCAAAA 12900

ATTTTTCATA ACTGTAATCA CGAATATCAT AAATATATCT ATTTTTAAAT GAAAAGAGAA 12960

GAAAATCTAC TAAAATGAAA GACACAATAC TATGTAACGG CAATATCATA TCATAATCAT 13020

TTTCTTTTAG CTTCTTTTTA ATTTCTTTTC TGAATTTTAC ATAACCTAAT ATCTTACTTA 13080

ATTTTCCTTT ACCAGAAAAA GAAATACGAT AGTAGTTTTG TTTTGTAATA ATCTCGTTAA 13140

TATTCTTATC CCAATATATA ACATCGTAAC TAATAGACAG TTTCTTCAAT AATTCTTTAT 13200

AAAAATTGAA GTAAGGAGTT AGATATATAT TATCAGATAG TATAAACAGT ACTCTCATTA 13260

AATTATTCTT TCTTACTTTC CCTCTCTAAA CATGTCTCCA GTTCGAGCAT AAACTGCTCT 13320

TTTGAAAAGT GATTTTCATA GTAACAACGA GCTTTCTTTC CTAACTCTCT TTGTCTCTTA 13380

ATAGATAACA TACTAAATTT ACAAATATTT TTTGCCAATT GTTTTACATC TCGTTCGGGA 13440

CTAACATATC CACAATTTGC TTCTTCTACA ATTATTTTAG CATCTCCTGA AATTGCACCT 13500

ATAATTGGTT TGCCTGCCGC CATATAAGAk TGTACCTTCC CAGGTATAGT ACGAGAAACT 13560

ATCGAGTCTC CTATTAAAGA AACTAACATA GCATCTGATT TTTTATAGAA GGATGGCATT 13620

TCCTCCAAAG AACGTCTTCC ATAGAAGGAA ATATTCTTTA ACTCCAATTC ATGAGCTAAT 13680

GCTTTCATGC TTAACAATTC CGTACCATCT CCAACAAAAT GAAAATGAAT TTTCTTGGGT 13740

AAATTGGTAT TCTTCTCTAT CAAACTGGCA GCTTTCAAAA TAGTTTCCAA ATTTTGTGCT 13800

TTGCCAATAT TACCAGCAAA AGTTAGGTCA ACACTTTCTT TATTAACTAT AGATTCATCA 13860

GGGATAAAAA GATCTTCTGC ATATTGTGGC AAATATGTAA TCTTTTGTTC GGATATGTCA 13920

AATTGCTTCA CAAAATAATT TTTAAATGAT GGACTAGTGA CAAATATATA ATCACTAGCT 13980

CGGTAAACTT TTTTTGAGAT AAATTTAAAC AGCTTGAAAA TCAAGCCATC TTGTTTCACT 14040

CCACCTACGG TTAAACTATC TGGCCAAACA TCCATACAAT ATAGAAACAT CGGTTTCTTA 14100

TATTTTTTTTT TATAAGCCAT ACCAGCCCAT GCCATCATAA CTGGAGACAA TTGGTTAACG 14160

AATACACAGT CAAAATTCGA TCCATCTTTC GTTTTATACC TCCCCAATAA AACTCCTAAA 14220

GTAGAACTAA TTGCAAAGCT AAAATAATTC AACAATCGAA ATACAACACT TTTTTTTCTA 14280

GGGATTGTAT AAGAACGATA TATCGTAACA CCTTCTATAA TCTCACGTCT TTTTTTATTA 14340

TGACGATAAT CTGCATATAT CTTCCCTTCA GGGTAATTAG GAATCCCAGC CAAAACAGAG 14400

ACTTCATGCC CTTTTCGAAC TAAATCTTCA CAAATATCTG ACAACCTGAA TGGTTCTGGC 14460

TTATAATGTT GGCAAACAAA TAGTATTTTC ATTGTCCAAT TTAACTTTCT TTCTTACCAC 14520

TACCCTCTAC AATACCTTTT CGTTTCAGTA CGTAAGGTAT TGTCTTAACT ATACATCTAA 14580

TATCCATTAT CAAAGACAGA TGTTTAACAT AGTAGCCATC TAACTCCGTC TTCATCTCAA 14640

CAGACAAAGT ATCACGCCCG TTAATTTGTG CCCATCCAGT TAACCCTGGC AAGATATCAT 14700

TTGCTCCATA CTTATCTCTC TCTGCAATCA AATCTAGTTC ATTTATACCC GCTGGTCTAG 14760

GACCTACAAT ACTCATATTA CCAACAAGAA TATTAAACAA TTGTGGTAGT TCATCCAAAG 14820

ATGTTTTTCG CAAGAAAGCC CCTACTTTTG TAATCyATTG CTCTGGATTA TATAAGTTTC 14880

GAGGCGCCAC ATTTTTAGGT GCATCTATTT TCATAGACCT AAATTTCAAA ATATAGAAGT 14940

ATTCTTTATG AATACCAAAG CGTTTTTGCT TAAATATAAC CGGACCTTCT GAATCAAGTT 15000

TAATCGCAAT TGCAATTATC ATAAAAACCG GACACAATAT TATTATCCCT ATTAAAGATA 15060

ATAATATATC ACCTAATCGT TTTATTATAC CGTACATAAA CAACCTCCAA CTATAAATTC 15120

TATTTCCATT TTTCATTCTA TTTCCATTTG ACAAATTAAA TCAGGCAGTA CATGCAACTA 15180

CAGAAACTCA ATATATATTT GGTCACTCAA TGATTTTCAG AAATATAATT CTTTTATCCT 15240

CTACGTCAGA TAAAACTTTT CTCCATCTAA ACAAAATTTA TTTGTTTCAG TAATATATGA 15300

GTTCTCAATA ATGAATTAGA AGGTCCAGTT CAATTATTCT TCCAAATAGA CCGAATATTA 15360

TTTGAAGACA TATCGGTTTC TGAAATTGCA ATCAGTACAT AAGCTAATAA ACTGATAAGT 15420

ATGCTCTGTA AGAATGCCAG AGTTATATTG TAGTCCCCTT CCATACTATA TTCATTTTAT 15480

TTTTTACCAT AATTTCCATA GGAACCGTAA ACTCCATACT TATTAACCGA GATATCCAAT 15540

TTATTTAAAA CAACTCCTAG GAACAGTTTC CCTGTTTGTT TTAATTGTTG TTTCGCTTTT 15600

TGGATATCAC GTTTATTCGC CTCACCTGTT GCTGTTACCA AGATGGACGC ATCACACTTT 15660

TGAGTGATAA TTGCCGCATC AATAACAATT CCAATAGGCG GTGTATCAAT AATGATATAA 15720

TCAAAATATT TACGCAATGT TTCAATCATA TCATTAAAAT TTTTACTTTG TAACAAGGCT 15780

GTAGGGTTTG GTGATACAGA TCCCGATTGA ACTACAAATA AATTTTCAAT ATTTGTATCA 15840

CATAAACCGT GAGATAAATC AGCTGTCCCA GATAAAAATT CTGTTAGCCC TGTAATTTTT 15900

TCACGAGATT TAAAAACTCC TAACATAACT GAATTTCGAG TATCGCCATC GATCAAAAGA 15960

GTTTTATAGC CTGCACGCGC AAACGACCAT GCTATATTTA TGGAAGTAGT TGTTTTTCCT 16020

TCCCCAGGGT TAACAGAAGT AACGGAAATT ACTTTTAGTT TATCTCCGCT CAACTGTATA 16080

TTTGTACACA AGGCATTGTA ATATTCTTCT GCCTTCTTAA TGAACTCCAG TTTTTTTTGT 16140

GCTATTTCTA ATGTCGGCAT CCTTCTCTCC TATTTCAACT TACCCAAGTT TGGCACAACT 16200

CCCAAAAGTG TCATCTGCAA TGTATTTTCG ATATCTTCCG GACGTTTCAC ACGAGTATCC 16260

AAAAGTTCAA GATGAAGAAC TATAACACTA GTTCCAATCA CCCCTGCCAA AAAACCAATT 16320

AGTGTATTGC GTTTAATATT TGGCGAAGAC GGGGATATCG CCGGCCTTGC CTCCTCCAGT 16380

GTTGTCACGT CAGAAACACG AGTAATACTG ATAATTTTTT GAGCAGCTAC TTCTCTCAAA 16440

GAGTTAGCGA TACGGCTTGC CTCTTCAGGA ACTCGATCAT TAACTGAAAT AGAGACAATA 16500

CGGGTATCAA CTGGTACTGT CACTTTAATT TTATTAGCCA AACCTTTTGG CGTCAAATCT 16560

AGTTTCAAAT CAGAAACAAC TTCCTCCAAA ACATCCTGCG AAAGGATAAT CTCACGGTAG 16620

TCTTTTACCA GATAAGTTCC TGCCTGCAAA TCCTGATTTG TCAACCCCGG CTTGTCTCCT 16680

TGATTGCGAT TCACTACGTA AATTCGCGTG GTACTCGTAT ATTCTGGCTT AACAATAAAA 16740

GTGCTATATG CAAAAGCCCC CGCACCTGTC ACAAGTGCCA CTATTAAAAT CATTAGCTTG 16800

CGTTTCCACA AGCTTTTAAC TAATTGAAAT ACATCGATTT CTATCGTATT TTGTTCTTTC 16860

ATCATTTCTC CTAAATTAGT TGATCCATTA CAATTTTTCG AGGATTGTCT ATAAAAAGTT 16920

CCTGAGCCTT CGCTTCTCCG TATTTTTGGG TAACAAGGTC ATATGCTTCT GCCATATGAG 16980

GAGGTCTACC GTCTAGATTG TGCATATCAC TTGCAATGAC ATGAACCAAA TCCTGCTCTA 17040

AAAAATACTG AGCTCTTTTT TTCATGAATT TATAACGTTC GCCAAAAAGT TTGGGTTTGA 17100

GGACATGTGA ACTATTTACT TGCGTGTAAC AGCCCATATC GATCAGTTCT CGAACGCGTT 17160

TTTCATTATT TTCAAGAGCA TCATAGCGCT CAATGTGGGC AATGACTGGA GTAATTCCCA 17220

ACATCAAGAT CTTGCTCAAG GCGCTATGAA TATCGCGATA AGGAGTGTTC ATACTAAACT 17280

CTATCAAGGC ATAACGACTA TCATTGAGGG TCGGAATCCG CTTTTTTTCC AGCTTATCCA 17340

GAACATCTGG TGTGTAATAA ATTTCAGCCC CGTAAGCAAT GACCAAGTCA CTCGCCACTT 17400

CCTTAGCTAT TTCCCGAACC TGAAGAAAGT TTTCTGCTAT CTTCTCTTCC GGAGTTTCAA 17460

ACATGCCCTT GCGACGGTGA GAGGTAGAAA CAATGGTTCG CACCCCCTGT CTGTAGGATT 17520

CTGCCAAGAG AGCCTTGCTT TCCTCTCTTG ACTTGGGACC GTCATCTACA TCAAAAACGA 17580

TATGCGAATG GATGTCTATC ATTTCATCTA CCCTCCATCA CATCCTGTAT AGCTGCTTTA 17640

ACTACAGCTA AACTACTATC ATCTATTTCC ATCACATAGA GGTTACTGTC TGGCATTGCA 17700

TAAGAAGGAA GATCCATCCG ACCTGTCCCT TTTAAATCTT GAGAATTTAC TTTATAATTC 17760

CCTCCACTTT CTAACTGAGC ATTGACCAAA TTTATCATGG TCTCAAGTGG CATATTTGTT 17820

TGGATAGAAT CTTGCAAGCT ATTAATGATC GTACTATAAT TTTTCAGCAC TTCGGTTGAC 17880

GTTAATTTTT GAAGGATAGC CACAATCACC TTTTGTTGAT GGCGCCCGCG GTCACGATCG 17940

CCATCTGCTA GGGAGTAGCG CTCACGAACA AAACCGAGAG CCTGTTCTGA ATCAAGATGA 18000

ACATTGCCTG CAGGGTAATA CTTTCCATTC GTATGGGCAG TAAATTCTTG ATCATTATAA 18060

ACATCAATTC CACCCAACAA ATCAATCAAT TTCAAAAACG AAGTGAAGTT CAATCGCACA 18120

TAGTAATTGA TATCCACTCC ATAGAGATTT TCTAAGGTGT GAATGGACGA ATCAACTCCA 18180

TAAATGCCCG CATGAGTCAA TTTATCTTTT TGATTATTTC CACCATCTGC GATTGGTACA 18240

TAGGCATCAC GTGGCGTTGT GGTCAAGAGG ATTTTCTTGG TATCTCGATT GACAGTCATC 18300

AGGATGTTGA CATCTGATCG CGACACCGAA CTAATAGGAC CATAGGTGTC AATTCCACTA 18360

ACATAGATAT TGAAAGACTG ACTCTTAGAC GTCTTAGGAG CTTCTACTTT TTTAGTGAAT 18420

CCCTTAGTAT AAATCTTTTT TATCTTCGAT GCGTAGTCTG GATACTCTGA CTCGATGATG 18480

TTTTCAAAGA CACTATTTAG GACAATGGCC TTAGTCTCCC CTGCAATCAA ACTCTTGTAA 18540

GCTGCCAAGT AAGACGAACT CTGGTTGACC GTCAAATCGG TATTCTGACT TGACTTGATA 18600

TCAGCTAGTA ATTTCTGAAT ATTTTCATTA TTAGTCCCAG TCGGTGCTGT CACACTCGTC 18660

AGTTGCGTAA CATTTTCGAT CTCACTATCT GCTAAAACAG CGACACTGAT TGAATATTCT 18720

GAGTAATTAG AAGTCGCATT TAAACGATTG GTCAGTCCAA CAAACTGCTG TACTGCAAAG 18780

AGCGACACAG AGCTGACAAG GATAGAGAAC ACCAACAGAA AAATAGTAAA CTTTTCAGCT 18840

TTTTTATAGA TAATCAAGAG TAGCCCTACC AAGGCAACTA GTAGGACTAA CGCAGTTACC 18900

ACTAGATTAA GATATCTAAA AGCAAGGATA TTGTACTTAA AGATTAAGAA CAATAAAAAA 18960

CAAACTAACA ATAAATAAAT AGTCAGCAAA ACTATATTAA CACTTCGCTT CACTTTCTGT 19020

GAACGTGATT TTTTAAAACG TCTACTCATG ATTAATACCT ATACATTGAA CATTATACGA 19080

TTATATCACT TTTTTACGGT AATGTCTACA CCTTTATTTT TACTATCTGC ATCTTTAAGT 19140

ATCTTAGTAG ACTTCCCGCG AAACAAAAAT ATAGTAAAAT GAAATAAGAA CAGAACAAAT 19200

CGTTCAGGAC AGTCAAATCG ATTTCTAACA ATGTTTTAGA AGCAGAGGTG 19250

(2) INFORMATION FOR SEQ ID NO: 36:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 21706 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

AAAGTTGAAA GACTGCTAGC TGTTTTTGAT ACCAATCGTT TCCAACTACA GAGCAAACAG 60

TATACAAAGT TTGTTTTTGG ATGTAAGCTT CTTGATGGAC AATTCCAAGA AAATCAAGAA 120

ATTGCTGACC TTCAATTTTT TGCCATTGAC CAACTGCCGA ACTTATCTGA AAAACGCATT 180

ACCAAGGAGC AAATAGAGCT TCTTTGGCAG GTTTATCAAG GTCATAGGGG GCAATATCTT 240

GACTAAGAAG ATGATTATCG TATTTCTAAA TCCATTTTTA ACAACTAGCA TGGTATAATA 300

ATATGCAGGA AAATTTTGAA TTATGAGGAA GACTAGATGA ATTTATGGGA TATTTTCTTT 360

ACGACTCAGG CAACCGAGCC GCCCAAATTT GACCTTTTTT GGTATGTTAG CCTATTTACG 420

CTCTTAGCCT TAACCTTTTA TACAGCCCAT CGCTATCGTG AAAAGAAGGT TTACCAACGA 480

TTTTTCCAAA TCTTGCAGAC TGTTCAGTTA ATCCTTCTTT ATGGTTGGTA CTGGGTCAAT 540

CATATGCCAC TGTCAGAAAG CCTACCCTTT TACCATTGCC GTATGGCTAT GTTTGTGGTA 600

CTCTTGCTTC CTGGTCAATC CAAATATAAA CAATACTTTG CATTATTGGG AACATTTGGG 660

ACATTAGCAG CCTTTGTTTA TCCAGTGCCA GATGCTTACC CTTTTCCACA TATCACCATT 720

CTATCCTTTA TCTTTGGTCA TTTAGCACTC TTGGGGAACT CTCTAGTTTA TCTATTGAGA 780

CAGTATAATG CGCGATTGCT GGATGTGAAG GGAATTTTTC TCATGACCTT TGCCCTAAAT 840

GCCTTGATTT TTGTGGTCAA TTTGGTGACA GGTGGCGATT ACGGATTTTT GACAAAACCG 900

CCATTGGTTG GGGATCACGG TCTAGTAGCT AATTATTTAC TTGTTTCAAT TGTGCTGGTA 960

GCTACTATCA GTTTGACTAA GAAAATCTTA GAATTCTTTT TAGCTCAAGA AGCAGAAAAA 1020

ATGATTGCAA AGGAAGCTTA ACACAGAGCT TTCTTTTTTG CTCTTAGAGA GTTTTTACAA 1080

GCAGCTTATA AAATAAGAAT TTCTGAATAG ACAAACTCAA AAAATGGCTG GGAAATTTAG 1140

GAAAAAAGCA AGCACGATTA AATTTTTTGT GTTATAATAT TTTGTGAATA GCTATGCCTA 1200

TGTTTAGCTA TGGAATAATA CGAAGTGCGA AACTTGGAAG ATAGAGAGGA AGCGATGTAA 1260

TGGCTAGAGA AGGCTTTTTT ACAGGTCTAG ATATTGGAAC AAGCTCTGTC AAGGTGCTTG 1320

TGGCCGAGCA GAGAAATGGT GAATTAAATG TAATTGGCGT GAGTAATGCC AAAAGTAAAG 1380

GTGTAAAGGA TGGAATTATT GTTGATATTG ATGCAGCAGC AACTGCTATC AAGTCAGCCA 1440

TTTCCCAAGC GGAAGAAAAG GCAGGCATTT CGATTAAATC AGTGAATGTC GGCTTGCCTG 1500

GTAATCTTTT GCAGGTAGAA CCAACTCAGG GGATGATTCC AGTAACATCT GATACTAAGG 1560

AAATTACGGA TCAAGATGTT GAAAATGTTG TCAAATCAGC TTTGACAAAG AGTATGACAC 1620

CTGACCGTGA AGTCATTACC TTTATTCCTG AAGAATTTAT TGTGGATGGT TTCCAAGGGA 1680

TTCGTGACCC ACGTGGCATG ATGGGGGTTC GCCTTGAAAT GCGTGGTTTG CTTTATACAG 1740

GACCTCGTAC TATCTTGCAC AATTTGCGTA AGACGGTTGA GCGTGCAGGT GTTCAGGTTG 1800

AAAATGTTAT CATTTCACCA CTAGCAATGG TTCAGTCTGT TTTGAACGAA GGGGAACGTG 1860

AATTTGGTGC TACAGTGATT GATATGGGGG CAGGTCAAAC GACTGTCGCT ACAATCCGTA 1920

ATCAAGAACT CCAGTTCACA CATATTCTCC AAGAAGGTGG AGATTATGTA ACTAAAGATA 1980

360

TCTCCAAGGT TTTGAAAACC TCTCGCAAAT TAGCGGAAGG CTTGAAACTG AATTACGGGG 2040

AAGCCTATCC GCCTCTTGCA AGCAAAGAAA CCTTCCAAGT AGAGGTTATT GGAGAAGTAG 2100

AAGCAGTCGA AGTGACGGAA GCCTACTTGT CAGAAATTAT TTCTGCACGA ATCAAGCACA 2160

TCCTTGAACA AATCAAGCAA GAATTAGATA GAAGGCGTCT ATTGGACCTC CCTGGTGGTA 2220

TTGTCTTAAT CGGTGGGAAT GCCATTTTAC CAGGTATGGT TGAGCTTGCT CAGGAAGTCT 2280

TTGGCGTCCG TGTCAAGCTT TATGTTCCAA ATCAAGTTGG TATCCGTAAT CCAGCCTTTG 2340

CGCATGTGAT TAGTTTATCA GAATTTGCGG GTCAATTAAC AGAAGTTAAT CTTTTGGCTC 2400

AGGGAGCGAT AAAAGGTGAG AATGACTTAA GTCATCAGCC AATTAGTTTT GGTGGGATGC 2460

TGCAAAAAAC AGCTCAGTTT GTACAATCAA CGCCTGTTCA ACCAGCTCCT GCTCCAGAAG 2520

TAGAGCCGGT GGCGCCTACA GAACCAATGG CGGATTTCCA ACAAGCTTCA CAAAATAAAC 2580

CGAAATTAGC AGATCGTTTC CGTGGATTGA TCGGAAGCAT GTTTGACGAA TAAAGAGGAA 2640

AAATAAATTA TGACATTTTC ATTTGATACA GCTGCTGCTC AAGGGGCAGT GATTAAAGTA 2700

ATTGGTGTCG GTGGAGGTGG TGGCAATGCC ATCAACCGTA TGGTCGACGA AGGTGTTACA 2760

GGCGTAGAAT TTATCGCAGC AAACACAGAT GTACAAGCAT TGAGTAGTAC AAAAGCTGAG 2820

ACTGTTATTC AGTTGGGACC TAAATTGACT CGTGGTTTGG GTGCAGGAGG TCAACCTGAG 2880

GTTGGTCGTA AAGCCGCTGA AGAAAGCGAA GAAACACTGA CGGAAGCTAT TAGTGGTGCC 2940

GATATGGTCT TCATCACTGC TGGTATGGGA GGAGGCTCTG GAACTGGAGC TGCTCCTGTT 3000

ATTGCTCGTA TCGCCAAAGA TTTAGGTGCG CTTACAGTTG GTGTTGTAAC ACGTCCCTTT 3060

GGTTTTGAAG GAAGTAAGCG TGGACAATTT GCTGTAGAAG GAATCAATCA ACTTCGTGAG 3120

CATGTAGACA CTCTATTGAT TATCTCAAAC AACAATTTGC TTGAAATTGT TGATAAGAAA 3180

ACACCGCTTT TGGAGGCTCT TAGCGAAGCG GATAACGTTC TTCGTCAAGG TGTTCAAGGG 3240

ATTACCGATT TGATTACCAA TCCAGGATTG ATTAACCTTG ACTTTGCCGA TGTGAAAACG 3300

GTAATGGCAA ACAAAGGGAA TGCTCTTATG GGTATTGGTA TCGGTAGTGG AGAAGAACGT 3360

GTGGTAGAAG CGGCACGTAA GGCAATCTAT TCACCACTTC TTGAAACAAC TATTGACGGT 3420

GCTGAGGATG TTATCGTCAA CGTTACTGGT GGTCTTGACT TAACCTTGAT TGAGGCAGAA 3480

GAGGCTTCAC AAATTGTGAA CCAGGCAGCA GGTCAAGGAG TGAACATCTG GCTCGGTACT 3540

TCAATTGATG AAAGTATGCG TGATGAAATT CGTGTAACAG TTGTTGCAAC GGGTGTTCGT 3600

CAAGACCGCG TAGAAAAGGT TGTGGCTCCA CAAGCTAGAT CTGCTACTAA CTACCGTGAG 3660

ACAGTGAAAC CAGCTCATTC ACATGGCTTT GATCGTCATT TTGATATGGC AGAAACAGTT 3720

GAATTGCCAA AACAAAATCC ACGTCGTTTG GAACCAACTC AGGCATCTGC TTTTGGTGAT 3780

TGGGATCTTC GCCGTGAATC GATTGTTCGT ACAACAGATT CAGTCGTTTC TCCAGTCGAG 3840

CGCTTTGAAG CCCCAATTTC ACAAGATGAA GATGAATTGG ATACACCTCC ATTTTTCAAA 3900

AATCGTTAAG TAAATGAATG TAAAAGAAAA TACAGAACTT GTTTTTCGAG AAGTTGCAGA 3960

GGCTAGTCTG AGTGCTCATC GAGAGAGTGG TTCGGTCTCT GTCATTGCAG TTACCAAGTA 4020

TGTAGATGTA CCGACAGCGG AAGCCTTGCT TCCGCTAGGT GTCCATCATA TCGGTGAAAA 4080

TCGTGTAGAT AAGTTTCTGG AAAAATATGA AGCTTTAAAA GATCGAGATG TGACTTGGCA 4140

TTTGATTGGT ACCTTGCAAA GACGTAAGGT GAAAGATGTC ATTCAATACG TTGATTATTT 4200

CCATGCATTG GACTCAGTAA AGCTAGCAGG GGAAATTCAA AAAAGAAGTG ACCGAGTCAT 4260

CAAGTGTTTC CTTCAAGTAA ATATTTCTAA AGAAGAAAGC AAACACGGTT TTTCGAGAGA 4320

GGAACTGCTG GAAATCTTGC CAGAGTTAGC CAGACTAGAT AAGATTGAAT ATGTTGGTTT 4380

AATGACGATG GCACCTTTTG AGGCTAGCAG TGAGCAGTTG AAAGAGATTT TCAAGGCGGC 4440

CCAAGATTTA CAAAGAGAAA TTCAAGAGAA ACAAATTCCA AATATGCCTA TGACCGAGTT 4500

AAGTATGGGA ATGAGTCGTG ATTATAAAGA AGCGATTCAA TTCGGTTCCA CTTTTGTTCG 4560

TATAGGTACA TCATTTTTTA AGTAGGAGAG AACCATGTCT TTAAAAGATA GATTCGATAG 4620

ATTTATAGAT TATTTTACGG AGGATGAGGA TTCAAGTCTC CCTTATGAAA AAAGAGATGA 4680

GCCTGTGTTT ACTTCAGTAA ATTCTTCACA GGAACCGGCT CTCCCAATGA ATCAACCTTC 4740

ACAGTCGGCT GGCACAAAAG AGAACAATAT CACCAGACTT CATGCAAGAC AACAGGAATT 4800

GGCAAATCAG AGTCAGCGTG CAACGGATAA GGTCATTATA GATGTTCGTT ATCCTAGAAA 4860

ATATGAGGAT GCAACAGAAA TTGTTGATTT ATTGGCAGGA AACGAAAGTA TCTTGATTGA 4920

TTTTCAGTAT ATGACAGAGG TGCAGGCTCG TCGTTGTTTG GACTATTTGG ATGGAGCTTG 4980

TCATGTTTTA GCTGGAAATT TGAAAAAGGT AGCTTCTACC ATGTATTTGT TGACACCAGT 5040

GAACGTTATT GTAAATGTTG AAGATATCCG TTTACCAGAT GAAGATCAAC AGGGTGAGTT 5100

CGGTTTTGAT ATGAAGCGAA ATAGAGTACG ATAATGATTT TTTTAATTCG TATGATTTAT 5160

AATGCAGTGG ATATTTACTC CCTGATTTTG GTAGCCTTCG CTGTCATGTC TTGGTTTCCA 5220

GGTGCCTACG AATCCAGTTT AGGTCGTTGG ATTGTAGCGT TGGTGAAACC AGTGCTTGCT 5280

CCCTTGCAAC GCCTGCCTTT ACAGATAGCG GGTCTTGATT TATCTGTTTG GGTTGCGATT 5340

GTTTTGGTTC GATTTTTAGG AGAAAACCTA GTGCGTTTTC TGGCGATGAT AGGATGAATA 5400

AAGGGATTTA TCAGCATTTC TCCATAGAAG ATCGTCCATT TCTTGACAAG GGAATGGAAT 5460

GGATAAAGAA GGTAGAAGAT AGCTATGCTC CTTTTTTAAC TCCTTTTATC AATCCTCATC 5520

AGGAGAAGCT ATTAAAGATT TTGGCCAAAA CCTATGGTCT TGCTTGTAGC AGTAGTGGGG 5580

AATTCGTCTC GAGTGAGTAT GTTCGAGTTT TATTATACCC AGATTATTTC CAACCAGAGT 5640

TTTCAGATTT TGAAATATCT CTCCAGGAAA TTGTGTATTC CAATAAATTT GAACATTTAA 5700

CGCATGCTAA GATTTTAGGG ACAGTCATCA ATCAATTAGG GATTGAACGG AAACTTTTTG 5760

GAGATATCCT AGTAGATGAA GAACGGGCGC AGATTATGAT TAATCAGCAG TTTCTTCTTC 5820

TCTTTCAAGA TGGACTAAAG AAAATTGGTC GTATACCTGT TTCGCTGGAG GAACGTCCTT 5880

TCACCGAGAA AATAGATAAG CTAGAACAGT ATCGAGAACT GGATTTATCT GTGTCTAGTT 5940

TTCGATTAGA TGTTCTTTTA TCAAATGTTT TGAAACTATC TAGGAATCAA GCAAACCAGT 6000

TGATTGAAAA GAAACTTGTC CAAGTAAATT ATCATGTGGT AGACAAATCA GATTACACTG 6060

TTCAAGTTGG AGACTTGATT AGTGTGAGAA AATTTGGTCG CTTGAGATTA CTTCAAGATA 6120

AGGGACAAAC GAAAAAAGAG AAGAAAAAAA TAACCGTCCA GTTATTATTA AGTAAGTGAG 6180

GAATAGAATG CCAATTACAT CATTAGAAAT AAAGGACAAG ACTTTTGGAA CTCGATTCAG 6240

AGGTTTTGAT CCAGAAGAAG TCGATGAATT TTTAGATATT GTGGTTCGTG ATTACGAAGA 6300

TCTTGTGCGT GCGAATCATG ATAAAAATTT GCGTATTAAG AGTTTAGAAG AGCGTTTGTC 6360

TTACTTTGAT GAAATAAAAG ATTCATTGAG CCAGTCTGTA TTGATTGCTC AGGATACAGC 6420

TGAGAGAGTG AAACAGGCGG CGCATGAACG TTCAAACAAT ATCATTCATC AAGCAGAGCA 6480

AGATGCGCAA CGCTTGTTGG AAGAAGCTAA ATATAAGGCA AACGAGATTC TTCGTCAAGC 6540

AACTGATAAT GCTAAGAAAG TCGCTGTTGA AACAGAAGAA TTGAAGAACA AGAGCCGTGT 6600

CTTCCACCAA CGTCTCAAAT CTACAATTGA GAGTCAGTTG GCTATTGTTG AATCTTCAGA 6660

TTGGGAAGAT ATTCTCCGTC CAACAGCTAC TTATCTTCAA ACCAGTGATG AAGCCTTTAA 6720

AGAAGTGGTT AGCGAAGTAC TTGGAGAACC GATTCCAGCT CCAATTGAAG AAGAACCAAT 6780

TGATATGACA CGTCAGTTCT CTCAAGCAGA AATGGCAGAA TTACAAGCTC GTATTGAGGT 6840

AGCCGATAAA GAATTGTCTG AATTTGAAGC TCAGATTAAA CAGGAAGTGG AAGCTCCAAC 6900

TCCTGTAGTG AGTCCTCAAG TTGAAGAAGA GCCTCTGCTC ATCCAGTTGG CCCAATGTAT 6960

GAAGAACCAG AAGTAGCTCC AATGCATCCG ATAGGTCCAA CACCAGCTAC AGAAACTGTT 7020

GATTCAATAC CGGGATTTGA AGCACCGCAA GAATCTGTTA CAATTTTATA AGAAATATTC 7080

TGAGAACAAT ATCTTATCCT TATATTTCCA GCGAGCAGGA GATGGTGTGA GTCCTGTAAT 7140

CCCTATTGAT AAGATTATCC TCTCAAAAAC TCAAGTCTGA AGCTAGTAAG ATTTGACGTT 7200

TCCCACGTTA CGGGATAAGA GGGAGAAAGA CTAAATCTTT TTCCGAATAA AGGTGGTACC 7260

ACGATTTTCG TCCTTTTTGG AAGTCGTGGT TTTTAATTTG TTATTATTTA TAAAGGAGAT 7320

ACCATGAAAC TCAAAGACAC CCTTAATCTT GGGAAAACTG AATTCCCAAT GCGTGCAGGC 7380

CTTCCTACCA AAGAGCCAGT TTGGCAAAAG GAATGGGAAG ATGCAAAACT TTATCAACGT 7440

CGTCAAGAAT TGAACCAAGG AAAACCTCAT TTCACCTTGC ATGATGGCCC TCCATACGCT 7500

AACGGAAATA TCCACGTTGG ACATGCTATG AACAAGATTT CAAAAGATAT CATTGTTCGT 7560

TCTAAGTCTA TGTCAGGATT TTACGCACCA TTTATTCCTG GTTGGGATAC TCATGGTCTG 7620

CCAATCGAGC AAGTCTTGTC AAAACAAGGT GTCAAACGTA AAGAAATGGA CTTGGTTGAG 7680

TACTTGAAAC TTTGCCGTGA GTACGCTCTT TCTCAAGTAG ATAAACAACG TGAAGATTTT 7740

AAACGTTTGG GTGTTTCTGG TGACTGGGAA AATCCATATG TGACCTTGAC TCCTGACTAT 7800

GAAGCAGCTC AAATTCGTGT ATTTGGTGAG ATGGCTAATA AGGGTTATAT CTACCGTGGT 7860

GCTAAGCCAG TTTACTGGTC ATGGTCATCT GAGTCAGCAC TTGCTGAAGC AGAGATTGAA 7920

TACCATGACT TGGTTTCAAC TTCCCTTTAC TATGCCAACA AGGTAAAAGA TGGCAAAGGA 7980

GTTCTAGATA CAGATACTTA TATCGTTGTC TGGACAACGA CTCCATTTAC CATCACAGCT 8040

TCTCGTGGTT TGACGGTTGG TGCAGATATT GATTACGTTT TGGTTCAACC TGCTGGTGAA 8100

GCTCGTAAGT TTGTCGTTGC TGCTGAATTA TTGACTAGCT TGTCTGAGAA ATTTGGCTGG 8160

GCTGATGTTC AAGTTTTGGA AACTTACCGT GGCCAAGAAC TCAACCACAT CGTAACAGAA 8220

CACCCATGGG ATACAGCTGT AGAAGAGTTG GTAATTCTTG GTGACCACGT TACGACTGAC 8280

TCTGGTACAG GTATTGTCCA TACAGCCCCT GGTTTTGGTG AGGACGATTA CAATGTTGGT 8340

ATTGCTAATA ATCTTGAAGT CGCAGTGACT GTTGATGAAC GTGGTATCAT GATGAAGAAT 8400

GCTGGTCCTG AATTTGAAGG TCAATTCTAT GAAAAGGTAG TTCCAACTGT TATTGAAAAA 8460

CTTGGTAACC TCCTTCTTGC CCAAGAAGAA ATCTCTCACT CATATCCATT TGACTGGCGT 8520

ACTAAGAAAC CAATCATCTG GCGTGCAGTT CCACAATGGT TTGCCTCAGT TTCTAAATTC 8580

CGTCAAGAAA TCTTGGACGA AATTGAAAAA GTGAAATTCC ACTCAGAATG GGGTAAAGTC 8640

CGTCTTTACA ATATGATCCG TGACCGTGGT GACTGGGTTA TCTCTCGTCA ACGTGCTTGG 8700

GGTGTTCCAC TTCCTATCTT CTACGCTGAA GATGGTACAG CTATCATGGT AGCTGAAACT 8760

ATTGAACACG TAGCTCAACT TTTTGAAGAA TATGGTTCAA GCATTTGGTG GGAACGTGAT 8820

GCCAAAGACC TCTTGCCAGA AGGATTTACT CATCCAGGTT CACCAAACGG CGAGTTCAAA 8880

AAAGAAACTG ATATCATGGA CGTTTGGTTT GACTCAGGTT CATCATGGAA TGGAGTGGTG 8940

GTAAACCGTC CTGAATTGAC TTACCCAGCC GACCTTTACC TAGAAGGTTC TGACCAATAC 9000

CGTGGTTGGT TTAACTCATC ACTTATCACA TCTGTTGCCA ACCATGGCGT AGCACCTTAC 9060

AAACAAATCT TGTCACAAGG TTTTGCCCTT GATGGTAAAG GTGAGAAGAT GTCTAAATCT 9120

CTTGGAAATA CTATTGCTCC AAGCGATGTT GAAAAACAAT TCGGTGCTGA AATCTTGCGT 9180

CTCTGGGTAA CAAGTGTTGA CTCAAGCAAT GACGTGCGTA TCTCTATGGA TATCTTGAGC 9240

CAAGTTTCTG AAACTTACCG TAAGATTCGT AACACTCTTC GTTTCTTGAT TGCCAATACA 9300

TCTGACTTTA ACCCAGCTCA AGATACAGTC GCTTACGATG AGCTTCGTTC AGTTGATAAG 9360

TACATGACGA TTCGCTTTAA CCAGCTTGTC AAGACCATTC GTGATGCCTA TGCAGACTTT 9420

GAATTCTTGA CGATCTACAA GGCCTTGGTG AACTTTATCA ACGTTGACTT GTCAGCCTTC 9480

TACCTTGATT TTGCCAAAGA TGTTGTTTAC ATTGAAGGTG CCAAATCACT GGAACGCCGT 9540

CAAATGCAGA CTGTCTTCTA TGACATTCTT GTCAAAATCA CCAAACTCTT GACACCAATC 9600

CTTCCTCACA CTGCGGAAGA AATCTGGTCA TATCTTGAGT TTGAAACAGA AGACTTCGTC 9660

CAATTGTCAG AATTACCAGA AGTTCAAACT TTTGCTAACC AAGAAGAAAT CTTGGATACA 9720

TGGGCAGCCT TCATGGACTT TCGTGGACAA GCACAAAAAG CCTTGGAAGA AGCTCGTAAT 9780

GCAAAAGTTA TCGGTAAATC ACTTGAAGCA CACTTGACAG TTTATCCAAA TGAAGTTGTG 9840

AAAACTCTAC TCGAAGCAGT AAACAGCAAT GTAGCACAAC TTTTGATCGT GTCTGAGTTG 9900

ACCATCGCAG AAGGACCAGC TCCGGAAGCT GCCCTTAGCT TCGAAGATGT AGCCTTCACA 9960

GTTGAACGTG CTACTGGTGA AGTATGTGAC CGTTGCCGTC GTATCGACCC AACAACAGCA 10020

GAACGCAGCT ACCAGGCAGT TATCTGTGAC CACTGTGCAA GCATCGTAGA AGAAAACTTT 10080

GCGGAAGCAG TCGCAGAAGG ATTTGAAGAG AAATAAGATT GAAAAGTCTA GGCAAAATTC 10140

AATTTGAGAA GAAAAGACAA CTAATTTTAT AGTCTATTAA ACGCATTGTA TCACGTTTTT 10200

GAATACCTGA TATGATGCGT TTTTTATTTA TTTTAAAAAT TTGCGAGGTA TGACTTTTTA 10260

TACTCAACAA GAATCAAAGA GAAACTTAGC AAGCTAACAG TAGTAAGATA AAATAGGAAT 10320

TTGATATTAG GGATAAGATT GGTAAATAGT GTAATATTTT TACAACAATA AATTTATATA 10380

GTTATTTCTG GTTTCTGAAA AGTATTATAT TTTATTTCAT ATTATACAAA TTTTTATTTT 10440

ATAATATCAG AACATACTTT TTTTAAAAGC AAATATGATA CAATTTTATT TGAAAAAAAT 10500

AAAAAAGGAG ATTTTATTAT AAAATTAAAA AGACTTGCTT TAATTAGTGG TATCGTCGGT 10560

CTTGTGGGAG GAATTTTACT TCTTATTGGT CCTTTTGTCT TGTTGGGAAT AGCGGTAAAC 10620

ACAGCTGCTA CAACTCTTAA TGGAGGAGCT ACTGCAGGGG CTTTTTCAGG TGTAGCCTTA 10680

CTCTTGAATG CCTTGAAGAT TGCAAATCTT GTTCTTGGTA TCATTGCTAT TGTTTACTAT 10740

AAAGGAGATA AGCGTGTAGG TGCAGCTCCG TCTGTACTAA TGATTGTTTC TGGTGGAGTT 10800

AGTCTCATTC TATTCCGTTC TTAGGATGGG TTGGGGGGAT TTTTGCTATT ATCGGAGGAT 10860

CTCTATTCCT TTCAACATTG AAGAAATTCA AATCAGAAGA ATAAAAGGTA TTTTAGCATG 10920

AAAAGAACAA AAAAGTTTAT CGGTATAGGA GTAGCTCTAT TATCTCTTTC TCTTCTAGTT 10980

GCATGTGGAA CATAAAGTTC AAAGAATACT TCAACAAGTA ATGATGAGAA GACAGTAGCA 11040

ACATCCAATA GTTCAAAAGA AACAATCACT TTCGATACAC CGGTTGTAAC AGACGATGCG 11100

ATTGAATCAA TACGCACTTA TGCAGATTAT ATAGATCTTT ATAAAAATAT TTTTGATGAT 11160

TATTTTACTA AAGCTGAGGA AGGTTTCAAA GGCATAGCTA TGGAAAATAA TGACTCGTTT 11220

ACTAAACTAA AAGAGTCAAC TCAAAAATTA TTCGATGCGC AGAAAAAAAG GTTAAATAAT 11280

GAAGATAGAA TAGAAACAAC CAAAAACAAT GTGATTGCCA AACATTGTCA AACAGTCCTT 11340

TCCTTTTTGG TTTTGACTAG CTTTTTTGTG AAAAATTGTG TAAAATAGAA TAGATAAACG 11400

AGGGGAAACC TCGGAAAATT TAAAGGAGAA TCCATCTAAT GGTAAAATTG GTTTTTGCTC 11460

GCCACGGTGA GTCTGAATGG AACAAAGCTA ACCTTTTCAC TGGTTGGGCT GATGTTGATT 11520

TGTCTGAAAA AGGTACACAA CAAGCGATTG ACGCTGGTAA ATTGATCAAA GAAGCTGGTA 11580

TCGAATTTGA CCAAGCTTAC ACTTCAGTAT TGAAACGTGC TATCAAAACA ACTAACTTGG 11640

CTCTTGAAGC TTCTGACCAA TTGTGGGTTC CAGTTGAAAA ATCATGGCGC TTGAACGAAC 11700

GTCACTACGG TGGTTTGACT GGTAAAAACA AAGCTGAAGC TGCTGAACAA TTTGGTGATG 11760

AGCAAGTTCA CATCTGGCGT CGTTCATACG ATGTATTGCC TCCAAACATG GACCGTGATG 11820

ATGAGCACTC AGCTCACACA GACCGTCGTT ACGCTTCACT TGACGACTCA GTTATCCCAG 11880

ATGCTGAAAA CTTGAAAGTG ACTTTGGAAC GTGCTCTTCC ATTCTGGGAA GATAAAATCG 11940

CTCCAGCTCT TAAAGATGGT AAAAACGTAT TCGTAGGAGC TCACGGTAAC TCAATCCGTG 12000

CCCTTGTAAA ACACATCAAA GGTTTGTCAG ATGACGAGAT CATGGACGTG GAAATCCCTA 12060

ACTTCCCACC ATTGGTATTC GAATTCGACG AAAAATTGAA CGTCGTTTCT GAATACTACC 12120

TTGGAAAATA AAAAATTGTA AGTCTAGAAT TGATTTCTAG GCTTTTTATG TTAGTATGGA 12180

AGTATGATAA GGAATAAAAA ACAAGATTAT GTACTGGCCT ACAAGCAACC AGCTTCAACC 12240

ACTTACATGG GTTGGGAAGA AGAAGCTTTA CCGATAGGCA ATGGTTCTTT AGGAGCAAAA 12300

GTATTTGGCC TTATAGGGGC TGAACGGATT CAATTTAATG AAAAAAGTCT CTGGTCTGGA 12360

GGTCCACTTC CTGATAGTTC AGATTATCAG GGTGGAAATC TTCAGGATCA GTATGTTTTT 12420

TTAGCTGAGA TTCGGCAGGC TTTGGAGAAG AGAGATTACA ATCTGGCTAA GGAACTGGCT 12480

GAGCAGCACC TAATTGGGCC AAAAACGAGT CAATATGGGA CCTATCTGTC TTTTGGGGAT 12540

ATTCACATTG AGTTCAGCCA GCAAGGTACG ACTTTGTCTC AGGTGACGGA CTATCAGAGA 12600

CAGCTGAATA TTAGTAAGGC ACTTGCGACG ACTTCTTATG TCTATAAGGG AACGCGATTT 12660

GAACGTAAAG CTTTTGCGAG TTTTCCAGAT GATCTCTTGG TTCAATGTTT TACTAAGGAA 12720

GGGTTGGAAA CTCTAGATTT TACTATAGAA CTATCCTTGA CCTGTGATTT GGCTTCTGAT 12780

GGAAAGTATG AGCAGGAAAA ATCTGATTAC AAGGAGTGTA AGTTGGATAT TACTGATTCT 12840

CATATCTTGA TGAAGGGAAG AGTTAAGGAT AATGATCTGC GGTTTGCTAG TTATCTAGCT 12900

TGGGAAACGG ATGGAGATAT TAGAGTTTGG TCAGATAGGG TTCAGATATC AGGAGCCAGT 12960

TATGCCAATC TCTTCTTGGC CGCTAAGACG GATTTTGCCC AAAATCCTGC TAGCAATTAT 13020

CGCAAGAAAC TAGATTTAGA GCAACAGGTG ATAGACTTGG TGGACACAGC TAAAGAAAAG 13080

GGCTATACCC AATTGAAATC AAGGCATATC GAGGACTACC AAGCCTTATT CCAGCGTGTT 13140

CAATTGGATT TGGAAGCTGA TGTTGACGCA TCCACTACAG ATGATTTGTT AAAAAATTAT 13200

AAGCCACAAG AAGGGCAGGC TTTGGAGGAG CTGTTCTTCC AGTATGGACG GTATTTATTG 13260

ATTAGTTCGT CCAGAGACTG CCCAGATGCT CTACCAGCTA ACCTACAGGG AGTCTGGAAT 13320

GCGGTCGACA ATCCTCCTTG GAATTCGGAC TATCACTTAA ATGTCAATCT GCAGCTGAAT 13380

TATTGGCCAG CCTATGTTAC CAATCTCCTA GAGACGGTCT TTCCAGTCAT CAACTATGTA 13440

GATGATTTGC GTGTCTATGG TCGTCTAGCG GCTGTAAAGT ATGCAGGAAT CGTCTCTCAG 13500

AAAGGTGAGG AGAATGGTTG GTTGGTTCAT ACTCAAGCGA CTCCCTTTGG TTGGACGGCA 13560

CCTGGTTGGG ATTACTATTG GGGTTGGTCA CCAGCTGCCA ATGCGTGGAT GATGCAAACC 13620

GTTTATGAAG CCTATTTATT TTATAGGGAC CAAGACTATC TCAGGGAGAA AATTTATCCC 13680

ATGTTGAGGG AAACGGTTCG TTTTTGGAAT GCCTTTTTAC ATAAGGATCA GCAGGCGCAG 13740

CGTTGGGTGT CTTCTCCGTC TTATTCCCCA GAACATGGGC CGATTTCGAT TGGCAATACC 13800

TATGACCAAT CTCTGATTTG GCAGTTATTT CATGATTTTA TTCAGGCTGC TCAGGAATTG 13860

GGACTGGATG AGGACTTGTT GACTGAGGTT AAGGAGAAGT CTGATTTACT AAATCCTTTG 13920

CAAATCACTC AATCTGGTCG AATCAGGGAG TGGTATGAGG AGGAAGAGCA GTATTTTCAA 13980

AATGAGAAAG TGGAGGCCCA GCATCGGCAC GCTTCCCATC TAGTGGGACT CTATCCTGGC 14040

AATCTCTTTA GCTACAAGGG ACAAGAGTAT ATTGAAGCGG CGCGTGCTAG CCTCAATGAT 14100

CGTGGAGATG GCGGCACAGG CTGGTCCAAG GCTAATAAGA TCAATCTCTG GGCGCGTTTG 14160

GGAGATGGCA ATCGAGCCCA TAAATTATTG GCAGAGCAGT TAAAGACATC CACCTTGCAA 14220

AATCTTTGGT GTAGCCATCC TCCTTTTCAG ATAGATGGTA ATTTTGGTGC TACTAGTGGC 14280

ATGGCAGAAA TGTTACTCCA GTCTCATGCA GCTTATCTGG TACCTCTAGC TGCCCTACCT 14340

GATGCTTGGT CAACAGGTTC TGTTTCAGGC TTAATGGCAC GTGGACATTT TGAAGTGAGC 14400

ATGAGCTGGG AAGATAAAAA ACTCTTACAG TTGACCATTT TATCAAGGAG TGGAGGAGAT 14460

TTGCGAGTTT CTTATCCAGA TATTGAGAAG AGTGTGATTA AAATGAATCA AGAAAAAATA 14520

AAAGCGAAAT GCATGGGGAA AGATTGTATT TCGGTGGCAA CAGCAGAAGG TGATCTTGTT 14580

CAATTTTATT TTTAAGAAGA TGTTATAAGG CAGTAATTTG AAACTGCCTT TTAATAAGGA 14640

TTTAAGAATA TAAGCAGTTT TCAACTAGTT GAAAAAACGT TATAATGATA ATAGGAAGTA 14700

ATACTCAATG AAAATCAAAG AGCACAAACT AGGAAGCTAG CCGCAGGTTG CTCAAAACAG 14760

TGTTTTGAGG TTGCAGATGG AAGCTGACGT GGTTTGAAGA GAGATTTTCG AGGAGTATAA 14820

TTTGTTTGAT AGAGGGTGGG TCTGATGGCT TATATTGAGA TGAAACACTG TTACAAGCGT 14880

TATCAGGTTG GGGACACGGA GATTGTGGCC AATTGTGATG TGAATTTTGA GATTGAAAAG 14940

GGGGAGCTGG TTATTATCCT TGGTGCTTCA GGTGCAGGCA AGTCAACAGT TCTTAACCTT 15000

CTTGGGGGAA TGGATACCAA TGATGAAGGG GAAATCTGGA TTGATGGTGT TAATATTGCG 15060

GATTATAGTT CCCACCAGCG CACCAATTAC CGTAGAAATG ATGTGGGGTT TGTTTTTCAG 15120

TTTTATAATC TAGTTTCTAA TCTGACAGCT AAGGAAAATG TGGAACTGGC TTCTGAAATT 15180

GTGACAGATG CCTTGAATCC TGATCAGGCC TTGACAGATG TAGGTCTGGC TCATCGTCTC 15240

AATAACTTTC CAGCCCAGCT TTCTGGAGGG GAGCAACAGC GAGTCTCCAT TGCACGCGCG 15300

GTAGCCAAAA ATCCTAAAAT TCTCCTTTGT GATGAACCGA CTGGAGCCTT GGATTATCAG 15360

ACGGGCAAGC AGGTTTTGAA AATTCTCCAA GACATGTCTC GTCAAAAGGG AGCGACGGTG 15420

ATCATCGTGA CTCATAATGG AGCTTTGGCG CCCATTGCTG ATCGCGTGAT TCAAATGCAC 15480

GATGCCAGTG TCAAGGATGT GGTGCTCAAC CAGCATCCTC AGGATATTGA CAGTTTGGAG 15540

TACTAGCATG ATCAAGCGAA AAACTTATTG GAAGGACTTA GTTCAGTCCT TCACAGGCTC 15600

CAAGGGGCGT TTTTTATCCA TCTTGATCCT GATGATGTTG GGATCTCTAG CCTTAGTAGG 15660

CCTCAAAGTA ACCAGTCCCA ACATGGAGGC GACAGCTAAT GCTTATTTAA CAACTGCTCA 15720

AACCTTGGAT TTGGCAGTCA TGTCTAACTA TGGCTTGGAT CAAGCAGACC AAGAAGAACT 15780

AAAACAGACG GAGGGCGCAG AGGTCGAGTT TGGCTATTTG ACAGATGTGA CTATGGATAA 15840

TGGGCAGGAT GCCATTCGGC TGTACTCCAA ACCAGAGCGA ATTTCAACCT TTCAGCTAAG 15900

AAAGGGACGA CTTCCTCAGT CAGACAAGGA AATCGCTTTG GCCACTCATT TGCAAGGCCA 15960

ATACAGCGTG GGACAGGAGA TTAGTTTTAA AGAAAAAGAA GAGGGTCATT CCTCTTTAAA 16020

AGACCATACT TATACCATTA CTGGTTTTGT GGATTCGGCT GAAATCCTCT CCCAGCGAGA 16080

TATGGGCTAC GCAGGAAGTG GAAGTGGGAC TCTGACAGCC TATGGGGTGA TTTTACCTAG 16140

TCAATTTGAT CAGAAAGTCT ACAATATAGC TCGTTTGAAA TATCAAGATT TAGCGGGTTT 16200

AAATGCCTTT TCATCAGCTT ATGAAGAAAA ATCCAAGCAA CATCAAGAAG AGCTTGAACA 16260

AATTTTATCA GATAATGGCA AGGTACGTCT GCAACTTTTG AAAAAAGAAG GACAAGAGTC 16320

TCTAGACAAG GGGCAAGAGA CCCTTGACAA GGCTCAGACT AATTTGCAGG AAGGCAAGCG 16380

TCGTTTAGCA GCTGCTCAAG CTCGTATACA GGCTCAAGAA AGTCAACTAG CCTTGTTTCC 16440

TCAAGTTCAG AGAGAGCAGG CTAGTGCTCA ACTTACCCAA GCCAAGCAGG AATTGGGCAA 16500

GGAAGAGGAC AAACTAAAGC AAGCTGAACA AAATCTAGCC CAAGAAAAGG AAAAATTAGA 16560

AAAACATCAG CAAGTCTTGG ATGATTTGGC GGAGCCAAGG TATCAGGTTT ATAATCGTCA 16620

GACCATGCCA GGTGGTCAGG GCTATCTTAT GTATAGCAAT GCTTCATCCA GTATTCGAGC 16680

AGTGGGCAAT ATCTTTCCTG TGGTACTTTA TGCCGTAGCA GCCATGGTGA CCTTTACGAC 16740

CATGACTCGC TTTGTAGACG AAGAGCGAAC TCATGCAGGG ATTTTTAAGG CCTTGGGTTA 16800

TCGTAGTAAG GATATTATCG CCAAGTTTCT CCTTTATGGA CTAGTAGCTG GGACTGTCGG 16860

AACGGCTCTA GGTAGTATAC TTGGTCATTA TTTGCTAGCC AGTGTAATTT CAAGTGTCAT 16920

TACAAAAGGC ATGGTGGTGG GAGAAACTCA GATTCAGTTC TATTGGACCT ATAGCTTACT 16980

AGCTTTTGTC TTGAGCTTGT TGGCGAGTGT GTTACCAGCC TATCTGGTGG CTTGGAGGGA 17040

ACTTCATGAC GAAGCAGCCC AGCTTCTACT TCCTAAACCT CCTGTCAAAG GAGCTAAAAT 17100

CTTATTGGAG CGTATCGGTT TTATCTGGCG TCGTCTCAGT TTTACTCATA AGGTAACAGC 17160

CCGCAACATC TTTCGTTATA AGCAGAGAAT GTTGATGACA ATCTTTGGTG TGGCAGGTTC 17220

TGTAGCTCTG CTCTTTGCAG GTTTGGGAAT CCAATCTTCT GTAGCAGGAG TTCCGTCTAA 17280

ACAGTTTCAA CAAATCCAAC AGTATCAGAT GCTTGTCTCT GAAAATCCTA GTGCGACCAA 17340

TCAGGACAAG GTAGAGCTAG CAGAAGTGTT GAAAGGGCAG GAGATACTAG CCTACCAGAA 17400

AATCTATTCT AAAGCGCTAT ACAAGGATTT CAAAGGCAAA GCTGGTCTTC AAAACATTAC 17460

TCTTATGATG ATAGAGAAGG AAGATTTGAC TCCCTTTATC CATCTTCAAC ATCATCAGCA 17520

GGAGCTGACA TTAAAAGATG GCATCGTTAT TACAGCTAAA CTCGCCCAGC TGGCAGGTGT 17580

CAAGGTTGGG CAGACTTTAG AAATTGAAGG TAAGGAACTA AAGGTCGTTG CTATTACTGA 17640

GAACTACGTT GGTCACTTTA TTTATATGAG TCAGGCTAGC TATGAGCAAC TTTACGGACA 17700

GCTACCCCAA GCCAACACTT ATCTGGTCTC ATTAAGGGAT ACCAGTGCAA CTAGTATCGA 17760

AAGTCAGGCG GGCTTGCTTA TGAATCAATC TGCGGTGTCC AGCGTTGTCC AAAATGCTTC 17820

AGCCATTCGA CTCTTCGACT CTATCGCTAG CTCACTCAAT CAGACCATGA CCATCTTGGT 17880

CATCGTATCG GTTCTATTAG CTATTGTCAT CCTTTACAAT CTGACCAATA TCAACGTAGC 17940

TGAGAGAATC CGTGAACTCT CCACTATCAA GGTTCTTGGT TTTCATAATA ATGAAGTCAC 18000

CCTCTACATT TACCGTGAGA CGATTGTGCT GTCCCTTGTG GGAATCGTAC TTGGTCTGAT 18060

AGCTGGTTTC TATTTACACC AATTTTTGAT TCAAATGATT TCGCCTGCGA CTATTCTCTT 18120

TTATCCGCAG GTAGGCTGGG AAGTCTATGT AATCCCAGTG GCAGCAGTAA GCATCATTTT 18180

GACCTTGCTT GGTTTCTTCG TCAATTATTA TCTGAGAAAG GTTGATATGT TAGAAGCCCT 18240

GAAATCTGTA GAGTAAGGTA GTTATTTTTA GCTGATTGAA CTTCTATTTA CTAATATTCA 18300

AAAATCCTCC GTTTCAAAGA GCAGGGAACT CTTTGTGACA GAGGATTTTT TCTATAGGGC 18360

TTTAGCAGCT GCAATTGCGG CTTCGAAGTT TGGCTCAGAA TTGATATTAT CCACGTATTC 18420

AACGTAGCGA ATCGTATTGT CAGTATCGAG GACAAAGACT GCGCGTGCTA ATAGGTGCCA 18480

TTCGTTGATC AAGAGGGCAT AATCGCGCCC GAAAGAATGG TCAAAGTAGT CTGAAAGCAT 18540

AATGGCATTG TCAAGGCCTT CAGCACCGCA CCAACGTTTT TGAGCAAAAG GTAGGTCCAT 18600

TGAAACAGTC AATACGACCG TGTTGTCCAG TCCAGCCAAT TCTTCATTAA AACGACGTGT 18660

TTGAGTTGAG CAGATGCCTG TATCGATAGA AGGAACGACA CTCAAGACTT TTTTCTTGCC 18720

ATCAAAATCA GCCAGAGATT TTTTAGAAAG ATCTGTTGTA GTAAGAGAAA AATCAAGCGC 18780

CTTGTCGCCG ACTTGTAGTT GTTTACCTGT AAAGCTCACA GGATTTCCGA GAAAAGTTAC 18840

CATAGGATAC TCCAATCTTT TTTCTTCCAT TTTAGCTGAA ACAGTCGGAA TTTTCCAATG 18900

ATTTGACCGG AAATATGGGC ATAGAAAAAA CGCCAGCTCA TGTGAGAATG ACGTTTTTCA 18960

TAGGTTTATT TTGCCAATCC TTCAGCAATC TTGTCAAGGT TGTATTTCAT CATGCTGTAG 19020

TAGCTGTCGC CTTCTTTACC TTGTTCTGCG ATAGAGTCAG TAAAGATTTG AGCGTAGATT 19080

GGGATGTTTG TGTCTTGAGA AACAGTTTTC ATTGGACGGT CATCCACACT TGATTCTACA 19140

AAGAGTGATG GAACTTTTGT TTGGCGAAGT TTTTCAACCA AGGTCTTGAT TTGTTCAGGA 19200

GTTCCTTCTT CTTCAGTATT GATTTCCCAG ATGTAAGCAC TTGGGACACC ATAGGCTTTA 19260

GAGAAGTATT TGAATGCTCC TTCGCTGGTT ACAATGAGTT TCTTTTCAGC AGGGATCTTA 19320

TTAAATTTAT CCTTACTTTC TTTATCAAGT TTGTCTAACT TATCAGTATA TTCTTTGAGA 19380

TTTTTTTCAT AGAATTCTTT ATTGTTAGGG TCTTTGGCGC TCAATTGTTT GGCGATATTT 19440

TTAGCAAAAA TAATACCGTT TTCAAGGTTA AGCCAAGCGT GTGGGTCTTC TTTTCCTTTT 19500

TCATTTTGAC CTTCAAGGTA GATAACATCA ACGCCGTCGC TGACTGCGAA GTAGTCTTTG 19560

TTTTCAGTTT TCTTGGCATT TTCTACCAAT TTTGTAAACC AAGCATTGCC ACCTGTTTCA 19620

AGGTTGATAC CGTTATAGAA AATCAAATTA GCCTCAGAAG TTTTCTTAAC GTCTTCAGGA 19680

AGTGGTTCGT ATTCGTGTGG GTCTTGCCCA ATCGGAACGA TACTATGAAG GTCAATTTTG 19740

TCACCAGCAA TATTTTTAGT AATATCAGCG ATGATTGAGT TTGTAGCAAC AACTTTTAGT 19800

TTTTGACCAG AAGTTGTATC TTTTTTTCCG CTAGCACATG CTACAAGAAT GATTGCAGAA 19860

AGAAAGAGAA CGAGTAATGT ACCTAATTTT TTCATTAGAT CCTCCAATTT ATTAGGGCTT 19920

TGCCCCTTAT TTTAACAAAT GTTTATTTTT CAGTTTCAAA TATCGTTGTT TGGGAGCGAT 19980

AAAGAAGCTA ATGAGAAAGA AACTAGCAGC TGTAAGCACG ATACTAGAAC CTGCCGCAAC 20040

ATTAAAACTA TAGCCAATAA AGAGTCCCAA AACTGAAGCA GTAGCTCCGA AGGTTGAGGA 20100

AAGGAAAATC ATACTTTTCA GACTATTAGC ATACAGATAA GCAGTTGCAG CTGGGGTAAT 20160

CAGCATGGCT ACAATCAGGA TAGTTCCGAC ACTTTGCATG GCTGTCACAG ACACGAGAGT 20220

CAGGAGTACC ATGAGAAGGT AGTGATAGAA ATTGACAGGC ATTCCCATGG CTTTAGCCAA 20280

GAGTTCATCA AAGGAAGTTA TCAAGAGTTG CTTGAAGAAA ATCCAGATTA ACAAGAGGAT 20340

AGCTGCCCCC ACACCCATAG TAATAAACAT ATCCGTATCT TGGACGGCCA GGATATTACC 20400

AAAAAGGATA TGGAAAAGGT CAGTTGAACT TTTAGCGACA CCAATCAAGA TGATACCGAG 20460

GGCTAAGAAA GAAGAAAAGG TAATGCCGAT GGCGGTATCG CTTTTGATAA TCGAGTTTCC 20520

TTTGATGTAG GTAATGATGA TGGCAGCTAG CAATCCAAAG ACAATGGCTC CGATAAAGAA 20580

GTCAAGGCCC AAGATGAAGG ATAGGGCTAC ACCTGGTAAG ACAGCATGTG AAATGGCATC 20640

TCCCATGAGT GACATCCCGC GTAGAATAAT GAAACATCCC ACAGCTCCAG CTACAATCCC 20700

GACGACAATA GCTGTTATCA AGGCATTTTG TAGGAAATGG AATTTTTGCA ATCCATCGAT 20760

AAATTCTGCA ATCATAGGTC ACCTCCATTG AAAAAGAGTT GATTACCGTA AGCTTCTTTT 20820

AGATTGGTTT CGGTAAAAGT TTCTTTTGTT GGACCAAAGG CAATCACTTC TCGATTGACA 20880

AGTAAGACTT GATCGAAGTA GTGGGGAATC TTGCTGAGGT CGTGGTGAAC GATGAGAACC 20940

GTCTTCCCAG CTTTTTTCAA ATCTCTCAGC GTATTCATGA TGATTTCCTC ACTGACAGAG 21000

TCAATCCCAG CAAAGGGTTC ATCCAAGAGG ATATAGTCGG CTTCCTGCAC CAAACATCTG 21060

GCAATCAAGA CCCGCTGGAA TTGACCTCCA GACAGTTGAC TAATTTGACG TTCAGCGTAG 21120

TCAGCTAGGC CGACGATTTC AAGGGCCTCT TGCACTTTCT TCCAATGTTT AGCCTTTAAA 21180

CTTCGAAAGA GAGGAATAGA GGGAAATAGT CCTAACGAGA CGCATTCCTT GACCTTGATG 21240

GGAAAGTTGT AGTCGATATT GATTTTTTGT TCGACATAGG CAATTCGGTG TAAGGATTTT 21300

TTAACTTCCT TGTCATCGAG AAATGCCTGA CCTTGATGTG GGATAATTCC CAACATACCT 21360

TTTAATAGTG TTGATTTCCC AGCGCCGTTT GGACCAATGA TGCCGGTAAT TGTTGGTCCA 21420

TGGAGCACTA GTGAAATATC CTTAAGTGCC AACGTTTCTT TGTAGGAGAC ACTGAGGTTT 21480

TCGATACGTA TCATAAACTT GTATTCCTCC TGTCTCTTAA TATACATTAA AAAAAAAATT 21540

AAGTCAAGTT AATTTTTGAA AAAATTAAAA TAATAACTGA AAAATAGATT CTAAAGATAA 21600

CTTTCAGGAT AAATTTCTAA ATTATAAAAC GCATAGTATC AAGTGTAAAA AACTTGGAAT 21660

TATGCGTTTT ATCATGGAAA GATTTTTTAT AATAGCTAAA AAATAA 21706

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6171 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

GATCCCCAGG AAAAACCGAG GTTTTCCCAA TCAATCGTTA CTGTCATATT CCACTCCTTA 60

TTCTAAAAAC CTATTTCTTA TATTCTACAC TATTTTTCTA AAATAGCAAG TATATTTTGT 120

AATTTTCAGA AAATTTCTCC AATAAAAACC AACTCTTAGA ACTGATTCTT CATTTCACTT 180

ATTTATCTTC AGTAACTACT TCCTGAAGAT AAGCGTCAAA AACTTCTTCA TCTGAAATCG 240

TGTCAGAAAT GAAGCTTCCA TTGCTAGTGC GTTCTGACAA GTTCAAGTCT TGCAATCGGC 300

TTTCATAGAT TGTTCCTTTA TTGGATTGGA CAAGCAGAGT TTGGTCGTTC ACATCCACTT 360

CCGTACTGAA GAAATCGCCA ACAAATCCTT GCTCTGCAAC TGCTCCTGCC AAGAAGACAC 420

GATGCGGTTT GTTTTTCAAC TCACGCAAGA CTTGTAATCC TCGTTTGGCA CGGCTGGTTG 480

CTAGAATTTC CTCAATGGAA ACACGTTTCA AGCTTCCACG CTGGGTCAAG AGGTAGAAGG 540

ACGAAGTATT ACAGATAAAG CCAGATTGGA GGACATCATC TTCTTTCAAA TTCATAGCCT 600

TGACACCTGC TGCCTTAGCA CCGACAACCG GAACCTCTTC GATATTGAAA CGCAGGGCAT 660

AACCATTTTG ACTAACCAAG ACAACATCAT CTAGTTTAAT CGGAGCCACT GCTACAATCT 720

GATCTGTATC GTCTTTGAGC TTAGCATACT TGACAGACTT AGATCTATAG GTCCGCCATG 780

GAGTGAATTC TTTTCGCTCT ACCCGTTTGA TTTGACCAAG GCGAGTCACT GCAAAGTAGG 840

TTGTCGCATC GTCAAACTGA TCCAGTACTT CCACATAAAG GATTTCTTCA TTCGTTTCAA 900

AGTTTGTGAT GGTTTGGCTC AGATGCTCTC CGATGTCCTT CCAACGAATA TCTGCCAACT 960

CATGGATTGG TCTGTAGATG ACATTTCCAA GACTTGTGAA CATCAAGAGG TGCTGGGTTG 1020

TCTTGGCAGA TTGAACAAAA ATCAAACGGT CATCATCACG CTTGCCAATT TCTTCCAAGG 1080

TGGAAGCCGC AAAGGAACGT GGACTGGTAC GCTTGATGTA ACCTGCCTTG GTCACGCTGA 1140

CGTAGGTATC TTCCTCAGCG ATAAGACTAG CTGTATCAAT CTCAATTGCT TTCGCAGTGT 1200

CTTCTAAAGA ACTCAAACGA GGAGTTGCAA ATTTCTTCTT GACCTCACGA AGTTCTTTCT 1260

TCATGAGATT GTACATAGTC CTTTCATCAC CGATAATAGC CGCCAGCATA GCAATCTTCT 1320

CACGAAGCTC TGCTTCTTCT TCCTGCAAGA CAACCACATC GGTATTGGTC AAACGGTACA 1380

GTTGCAAAGT TACGATAGCC TCAGCCTGTT CTTCCGTAAA ATCATAGCTA ACTTTGAGGT 1440

TTTCCTTGGC GTCCGCCTTA TTCTCAGAAG CACGGATAAG AGCAATGACT TCATCCAAAA 1500

TCGAAATCAC ACGAATCAAA CCTTCGACGA TATGGAGACG TTTCTCAGCC TTTTCTTTGT 1560

CAAAGCGTGA ACGCGCCAAA ATCACTTCTC GACGGTGAGC GATATAGCTA GACAGGATTG 1620

GAACAATCCC AACCTGACGA GGTGTGAAAT TGTCAATCGC CACCATATTA AAGTTGTAGT 1680

TGATTTGTAG GTCGGTGTAC TTAAATAAGT AGTTGAGAAC AAGCTCAGTA TTAGCGTCTT 1740

TCTTAAGTTC GATAGCGATA CGAAGACCAT CACGGTCAGA CTCATCACGA ACCTCAGCAA 1800

TCCCAGCTAC CTTGTTATTA ACACGAACAT CATCGATTTT CTTGACTAGA TTGGCCTTAT 1860

TGATTTCATA AGGAATCTCA ATAATAACGA TTTGTTCCTT ACCACCTTTT AGCTTTTCAA 1920

TTTCAGTCTT GGAACGAACA ACCACGCGCC CTTTCCCAGT CTCATAAGCT TTCTTGATTT 1980

CATCACGACC CTGAATAATA GCCCCTGTAG GGAAGTCTGG TCCAGGCAAG AATTCCATGA 2040

GTTTATCAAT CTTTGCAGTT GGGTGGTCAA TCATGTAAAC TGCAGCATCT ATGACCTCAG 2100

CTAAATTATG GGGAGGAATG TCTGTGGCAT AACCAGCCGA AATCCCAGTC GAACCATTGA 2160

CCAAGAGGTT TGGAAAGGCT GCTGGCAAGA CCGTTGGTTC TTTCTCCGTA TCGTCAAAGT 2220

TCCATGCAAA AGGAACTGTC TTTTTCTCGA TATCCTGAAG AAGGTAGCCT GCAATTTCAG 2280

ACAAACGTGC CTCAGTATAA CGCATAGCCG CAGGAGGATC TCCGTCCATA GAACCGTTAT 2340

TACCGTGCAT TTCAACTAGA ATCTCACGAT TTTTCCAGTT CTGTGACATA CGAACCATGG 2400

CATCATAGAT AGAAGAATCC CCGTGTGGGT GGAAATTCCC CATGATGTTC CCGACTGACT 2460

TGGCCGACTT ACGGTAGCTC TTGTCAAAAG TATTGCTATC CTTATTCATA GAATAAAGAA 2520

TACGGCGCTG AACCGGCTTC AACCCATCAC GAATATCTGG CAAAGCCCGG TCTTGAATAA 2580

TGTACTTGGA GTAGCGACCA AAGCGCTCTC CCATGATGTC CTCCAGGGAC ATGTTTTGAA 2640

TGTTAGACAT AAGATACAAA GCCCATAAAA TACCAAGTGA AAATAGAAAA TTCTTGAAGT 2700

AAGCAAACTC ACAAGAGAAT TTATCTTTTT CACACAGTAT CTAGGGCGTG TTCAACTCCT 2760

TTCAAAGAAT GTAGAGTAGG TTTTTATGCA GTAAAAGATA TTTTACGGGA ATTCCTCCCG 2820

TGTTCAGTTA CGATAAGTAA CCAAACTATC CTGTTTGTAT TTTTCAATAT GAAAATCTGG 2880

TTTTCCAAAA TTAGTCTTAG TTTGTGTCTT AGCCGCTCCC TTAAGCGCCT CTTTGAGATA 2940

AGCACTCATA GCAGATTCTT CATTAATAAT CCTGCAATTT TTTCAAACCA AGATTTTCAA 3000

ACTGCTTTTT CACATAGTCA TTCACATCCG ACTCTAATTT CCAGTTTACT AACATATTAT 3060

TTTCTTTCAT TAAAACACTG TCGTTTCTTC TAGCGTAAAC TTGACATTAT CTTCAATCCA 3120

TTTACGGCGT GGTTCTACCT TATCTCCCAT GAGAACATTG ACGCGGCGTT CGGCGCGCGC 3180

TAAATCTTCA ATTGTGACAC GGATGAGGGT ACGTGTTTCT GGGTTCATGG TTGTTTCCCA 3240

GAGCTGGTCC GCATTCATCT CACCAAGTCC TTTGTATCGT TGGAGGGTAG CGCCTTTACC 3300

GAACTGTTTA CGGAGTTCTT CTAGTTCTCC GTCCGTCCAA GCGTAGGCCA CTTCTTCTTT 3360

CTTGCCTTTA CCTTTGGACA TCTTGTAAAG AGGTGGGAGG GCAATATAGA CATGACCTGC 3420

CTCGACTAGC GGACGCATGT AACGGTAGAA AAATGTCAAG AGCAAGGTCT GGATATGGGC 3480

ACCGTCGGTA TCCGCATCGG TCATGATAAT GATCTTATCA TAGTTGGCAT CTTCAATAGA 3540

GAAGTCTGCT CCAACACCCG CACCAATGGT ATAAATCATG GTATTGATCT CTTCATTTTT 3600

GAGGATATCC GCCATCTTGG CCTTGGCTGT ATTGACAACC TTACCACGAA GAGGTAGAAT 3660

AGCCTGGAAC TTGCGGTCAC GACCTTGTTT GGCAGAACCA CCGGCAGAGT CCCCCTCAAC 3720

TAGATAGAGT TCATTCTTAG CAGGATTCTT AGATTGGGCT GGGGTCAATT TCCCAGACAA 3780

CAAGCCCTTA TCTTTCTTGT TTTTCTTCCC ATTTCGGCTC TCATCACGCG CCTTACGTGC 3840

TGCTTCACGA GCATCACGGG CCTTGATAGC CTTGCGGATG AGGTTAGAAG CTAATTCCCC 3900

ATTTTCCATA AGGAAAAAGG TCAACTTATC AGCCACTATT CCATCCACAA CTGGGCGAGC 3960

TAGGGGGCTT CCTAGTTTAT CCTTGGTCTG TCCTTCAAAC TGCAAGTGTT CTTCAGGAAC 4020

TAAGATAGAA AGAACGGCCG CTAGTCCCTC ACGATAGTCT GAACCTTCAA GGTTTTTATC 4080

TTTTTCCTTG AGAAGACCTG TTTTACGTGC ATAGTCATTC ATGACCTTGG TAATGGCAGA 4140

CTTGAGTCCT GTCTCGTGCG TTCCACCGTC CTTGGTGCGA ACGTTATTGA CAAAAGATAG 4200

AATGTTATCT GAGAATCCGT CATTGTACTG GAGGGCTACT TCCACTTGAA AACCATTGTC 4260

TTCCCCTTCA AAGTAAAGAA CTGGCGTCAA GATTTCCTTA TCTTCGTTGA GATAAGAAAC 4320

AAAATCTTGT ACTCCATTCT CATAGTGGAA CTCAATCGCT TCATTTGTTC GCTTGTCCGT 4380

TAAAGACAAG GTCACATTTT TCAAGAGAAA GGCTGATTCA TTAAGGCGCT CTGAAATGGT 4440

ATTGTACTTG AAATCTGTCG TAGAAAATAT AGTCGCGTCA GGCATAAAAG TAACTTTGGT 4500

GCCTGTTTTA GACTTGGGTG CTGTACCGAT TTTCTTCAAA GTCGTGACAG GTTTTCCACC 4560

ATTTTCGAAA CGTTGCTTGT AAACTGCGCC ATCACGGGTA ATTTCAACTT CTAACCAGCT 4620

AGAAAGGGCG TTAACAACGG AAGAACCCAC TCCGTGAAGT CCACCTGATG TCTTATAGCC 4680

ACCTTGACCG AATTTCCCTC CGGCATGAAG AATGGTAAAG ATAACCTCAA CAGTTGGAAT 4740

TCCCATAGCG TGCATACcTG TCGGCATCCC ACGTCCATGG TCTTGAACCG TTAGACTACC 4800

GTCTTTATTG ATAGTTACAT CAATACGATC ACCAAACCCA GACAAGGCTT CATCGACTGC 4860

ATTATCAACG ATTTCCCAAA CTAGGTGATG AAGACCAGCG CCATCGGTCG ATCCAATATA 4920

CATCCCTGGA CGTTTTCGGA CCGCATCCAA CCCTTCTAGC ACCTGAATAG CATCATCATT 4980

ATAATTGTTA ATATTGATTT CCTTTTTTGA CACAAGGAAC CTCCTATTCG TTCATCTTTA 5040

CTATTCTACA GGTTTTCCAA GGATTTTGCA AAATTTTTCT TTCTCCGATG TGACAATTTC 5100

AGCAGAGATT CTCTGCTTTT CTTTCCCAAT TCATGATATA ATAGGAGTAT GATTACAATA 5160

GTTTTATTAA TCCTAGCCTA TCTGCTGGGT TCGATTCCAT CTGGTCTCTG GATTGGACAA 5220

GTATTCTTTC AAATCAATCT ACGCGAGCAT GGTTCTGGTA ACACTGGAAC GACCAACACC 5280

TTCCGCATTT TAGGTAAGAA AGCTGGTATG GCAACCTTTG TGATTGACTT TTTCAAAGGA 5340

ACCCTAGCAA CGCTGCTTCC GATTATTTTT CATCTACAAG GCGTTTCTCC TCTCATCTTT 5400

GGACTTTTGG CTGTTATCGG CCATACCTTC CCTATCTTTG CAGGATTTAA AGGTGGTAAG 5460

GCTGTCGCAA CCAGTGCTGG AGTGATTTTC GGATTTGCGC CTATCTTCTG TCTCTACCTT 5520

GCGATTATCT TCTTTGGAGC TCTCTATCTT GGCAGTATGA TTTCACTGTC TAGTGTCACA 5580

GCATCGATTG CGGCTGTTAT CGGGGTTCTG CTCTTTCCAC TTTTTGGTTT TATCCTGAGT 5640

AACTATGACT CTCTCTTCAT CGCTATTATC TTAGCACTTG CTAGTTTGAT TATCATTCGT 5700

CATAAGGACA ATATAGCTCG TATCAAAAAT AAAACTGAAA ATTTGGTCCC TTGGGGATTG 5760

AACCTAACCC ATCAAGATCC TAAAAAATAA AATGCCAGTT CTGTACTGCC CCCAAACAGT 5820

TAGACAAATA ATTTATCCAA AGGATTTAGT TCTGTACTGC ACAGGACTAA GTCCTTTTAG 5880

TTTTACCTTA ATTCGTTTGT TGTTGTAGTA ATCAATATAG TCTATAATGG CTTGTTCCAA 5940

TTGATTAAGT GATTTAAATG TTTTCTCATA GCCATAAAAC ATTTCGGATT TTAAAATGCC 6000

AAAGAAAGAT TCCATCCTAC CGTTGTCTTG GCTGTTGCCC TTACGTGACA TGGATGCTTG 6060

AATTCCCTTA CTCTCTAGGA ACCGATGATA AGAATCGTGT TGGTATTGCC AGCCTTGGTC 6120

ACTATGGAGA ATCGTATTCT CGTAGTGCTT CTCTGTGAAT GCCTGTTCCA A 6171

(2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18475 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

TATTACAAAT AAAAAAACGG AGGAGTGCTT TATGAAAGCC TATACTTATG TTAAACCAGG 60

ACTTGCTTCT TTTGTTGATG TAGACAAACC AGTTATTCGC AAGCCAACAG ACGCTATTGT 120

GCGTATTGTA AAAACCACTA TTTGTGGAAC AGACCTCCAT ATTATCAAAG GGGATGTTCC 180

TACTTGCCAA AGTGGTACCA TTCTTGGCCA CGAAGGGATT GGGATTGTTG AAGAAGTTGG 240

GGAAGGAGTT TCCAACTTCA AAAAAGGTGA CAAGGTCTTG ATTTCTTGCG TCTGTGCCTG 300

TGGTAAATGC TACTACTGTA AAAAAGGAAT TTATGCTCAC TGTGAAGACG AAGGGGGCTG 360

GATTTTCGGT CACTTGATTG ATGGTATGCA GGCTGAATAT CTACGTGTCC CTCATGCAGA 420

TAATACTCTT TACCATACTC CAGAAGACTT GTCAGATGAA GCTTTGGTTA TGCTGTCAGA 480

CATTCTGCCT ACTGGATATG AAATTGGTGT CTTAAAAGGG AAAGTAGAAC CTGGTTGCAG 540

CGTAGCCATT ATTGGTTCAG GTCCAGTTGG ATTGGCTGCT CTTTTAACAG CCCAATTCTA 600

TTCACCAGCT AAATTGATTA TGGTAGACCT AGACGATAAC CGCTTGGAAA CTGCCCTATC 660

ATTCGGTGCG ACTCATAAGG TTAATTCTTC AGACCCTGAA AAAGCCATTA AAGAAATTTA 720

TGATTTGACA GATGGTCGTG GTGTGGATGT CGCTATCGAA GCTGTTGGTA TTCCTGCAAC 780

ATTTGATTTC TGTCAAAAGA TTATCGGTGT AGACGGAACG GTTGCCAACT GTGGTGTGCA 840

TGGTAAACCA GTTGAATTCG ATTTAGATAA ACTTTGGATT CGCAACATCA ATGTAACAAC 900

TGGTTTGGTA TCTACAAATA CGACTCCACA ATTGTTGAAA GCACTTGAAA GTCATAAGAT 960

TGAACCGGAA AAATTGGTAA CTCACTATTT CAAACTCAGT GAAATTGAAA AAGCCTACGA 1020

AGTCTTCAGT AAGGCAGCAG ACCACCATGC CATTAAGGTC ATTATCGAAA ACGATATCTC 1080

AGAAGCCTAA GTAGTAAAAA TATTTTTGTA CATAAGTAAA TAGAAATTCA GTCATCCATC 1140

AGATGGCTGG ATTTTTTATC AAAAAATTAA GAAATGAGCA TATTTCTTTC CTTGTCTGGC 1200

GGAATTGGTT ATAATATACG GTACAAAGGA ATGAATGAAT ATGTATCGTG TTATAGAAAT 1260

GTACGGAGAT TTTGAACCGT GGTGGTTCTT AGAAGGTTGG GAAGAAGATA TTGTAGCAAG 1320

TAGAAAATTT GACCAGTATT ATGATGCTCT CAAATACTAC AAAACTTGCT GGTTTAGATT 1380

GGAACAAGAA TCGCCTCTTT ATAAAAGTAG AAGCGACTTG ATGACCATTT TTTGGGACCC 1440

GGAAGACCAA CGCTGGTGTG ATGAATGTGA TGAGTATTTA CAACAATACC ATTCTTTGGC 1500

TCTTTTGCAG GATGAGCAGG TTATCCCAGA CGAAAAACTA CGCTCAGGCT ATGAAAAACA 1560

AACCAGTCAG GAAAGGAATC GTTCTTGCCG TATGAAATTA AAATAGAGAA AAGTAACTTT 1620

TTTGGAGTTG CTTTTTTTAT TTTTCTAACT CTTTGCGAAT AGTATAGGTG AGGAGGTAAG 1680

TATGGTTCAA GAAATTGCAC AAGAAATCAT TCGTTCAGCT CGGAAAAAAG GGACGCAGGA 1740

TATCTATTTT GTCCCTAAGT TAGACGCCTA TGAGCTTCAT ATGAGGGTAG GAGACGAGCG 1800

CTGTAAAATT GGTAGCTATG ATTTTGAAAA GTTTGCAGCC GTTATCAGTC ACTTTAAGTT 1860

TGTGGCGGGT ATGAATGTGG GAGAAAAAAG ACGTAGTCAA CTGGGTTCCT GTGATTATGC 1920

CTATGACCAT AAGATAGCGT CTCTACGTTT ATCTACTGTA GGCGATTATC GGGGGCATGA 1980

GAGTTTGGTT ATCCGTTTGT TGCACGATGA GGAGCAGGAC CTGCATTTTT GGTTTCAGGA 2040

TATTGAAGAA TTAGGCAAGC AGTACAGGCA ACGGGGACTC TATCTTTTTG CTGGTCCGGT 2100

TGGGAGTGGT AAGACGACCT TGATGCATGA ATTGTCCAAG TCACTCTTTA AAGGACAGCA 2160

AGTTATGTCC ATCGAAGATC CTGTCGAAAT CAAGCAGGAC GACATGCTTC AGTTGCAGTT 2220

GAACGAAGCA ATCGGCCTAA CCTATGAAAA TCTAATCAAA CTTTCCTTGC GTCATCGACC 2280

AGATCTCTTG ATTATCGGAG AAATTCGTGA CAGCGAGACG GCGCGTGCAG TGGTCAGAGC 2340

TAGTTTGACA GGTGCGACAG TCTTTTCAAC CATTCACGCC AAGAGTATCC GAGGTGTTTA 2400

TGAGCGTCTG CTGGAGTTGG GTGTGAGTGA AGAAGAATTG GCAGTTGTTC TGCAAGGAGT 2460

CTGCTACCAG AGATTAATCG GGGGAGGAGG AATCGTTGAC TTTGCAAGCA GAGATTATCA 2520

AGAACACCAA GCAGCCAAGT GGAATGAGCA AATTGACCAG CTTCTTAAAG ATGGACATAT 2580

CACAAGTCTT CAGGCTGAGA CGGAAAAAAT TAGCTACAGC TAAGCAAAAA AATATCATCA 2640

CCCTATTTAA CAATCTCTTT TCTAGCGGTT TTCATCTGGT GGAGACTATC TCCTTTTTAG 2700

ATAGGAGTGC TTTGTTGGAC AAGCAGTGTG TGACCCAGAT GCGTGTGGGC TTGTCTCAGG 2760

GGAAATCATT CTCAGAAATG ATGGAAAGTT TGGGATGTTC AAGTGCTATT GTCACTCAGT 2820

TATCCCTAGC TGAAGTTCAT GGCAATCTCC ACCTGAGTTT GGGAAAGATA GAAGAATATC 2880

TGGACAATCT GGCTAAGGTC AAGAAAAAAT TGATTGAAGT AGCGACCTAT CCCTTGATTT 2940

TGCTGGGTTT TCTTCTCTTA ATTATGCTGG GGCTACGGAA TTACCTGCTC CCACAACTGG 3000

ATAGTAGCAA TATTGCCACC CAAATTATCG GTAATCTGCC CCAAATTTTT CTAGGCATGG 3060

TAGGGCTTGT TTCCGTGCTT GCCCTTTTAG CACTCACTTT TTATAAAAGA AGTTCTAAGA 3120

TGAGTGTCTT TTCTATCTTA GCACGCCTTC CCTTTATTGG AATCTTTGTG CAGACCTACT 3180

TGACAGCCTA TTATGCACGT GAATGGGGGA ATATGATTTC ACAGGGAATG GAGTTGACGC 3240

AGATTTTTCA AATGATGCAG GAACAAGGTT CCCAGCTCTT TAAAGAAGTC GGTCAAGATC 3300

TGGCTCAAAC CCTGAAAAAT GGCCGTGAAT TTTCTCAGAC GATAGGAACC TATCCTTTCT 3360

TTAGGAAGGA ATTGAGTCTC ATCATAGAGT ATGGGGAAGT TAAGTCCAAG CTGGGTAGTG 3420

AGTTGGAAAT CTATGCTGAA AAAACTTGGG AAGCCTTTTT TACCCGAGTC AACCGCACCA 3480

TGAATTTGGT GCAGCCACTG GTTTTTATCT TTGTGGCACT GATTATCGTT TTACTTTATG 3540

CGGCAATGCT CATGCCCATG TATCAAAATA TGGAGGTAAA TTTTTAAAAT GAAAAAAATG 3600

ATGACATTCT TGAAAAAAGC TAAGGTTAAA GCTTTTACAT TGGTGGAGAT GTTGGTGGTC 3660

TTGCTGATTA TCAGCGTGCT TTTCTTGCTC TTTGTACCTA ATCTGACCAA GCAAAAAGAA 3720

GCAGTCAATG ACAAAGGAAA AGCAGCTGTT GTTAAGGTGG TGGAAAGCCA GGCAGAACTT 3780

TATAGCTTAG AAAAGAATGA AGATGCTAGC CTAAGAAAGT TACAAGCAGA TGGACGCATC 3840

ACGGAAGAAC AGGCTAAAGC TTATAAAGAA TACAATGATA AAAATGGAGG AGCAAATCGT 3900

AAAGTCAATG ATTAAGGCCT TTACCATGCT GGAAAGTCTC TTGGTTTTGG GACTTGTGAG 3960

TATCCTTGCC TTGGGCTTGT CCGGCTCTGT CCAGTCCACT TTTTCAGCGG TAGAGGAACA 4020

GATTTTCTTT ATGGAGTTTG AAGAACTCTA TCGGGAAACC CAAAAACGCA GTGTAGCCAG 4080

TCAGCAAAAG ACTAGTCTGA ACTTAGATGG GCAGACGCTT AGCAATGGCA GTCAAAAGTT 4140

GCCAGTCCCT AAAGGAATTC AGGCCCCATC AGGCCAAAGT ATTACATTTG ACCGAGCTGG 4200

GGGCAATTCG TCCCTGGCTA AGGTTGAATT TCAGACCAGT AAAGGAGCGA TTCGCTATCA 4260

ATTATATCTA GGAAATGGAA AAATTAAACG CATTAAGGAA ACAAAAAATT AGGGCAGTGA 4320

TTTTACTGGA AGCAGTAGTC GCTCTAGCTA TCTTTGCCAG CATTGCGACC CTCCTTTTGG 4380

GACAAATTCA AAAAAATAGG CAAGAGGAAG CAAAAATCTT GCAAAAGGAA GAAGTCTTGA 4440

GGGTAGCTAA GATGGCCCTG CAGACGGGGC AAAATCAGGT AAGCATCAAC GGAGTTGAGA 4500

TTCAGGTATT TTCTAGTGAA AAAGGATTGG AGGTCTACCA TGGTTCAGAA CAGTTGTTGG 4560

CAATCAAAGA GCCATAAGGT CAAGGCTTTT ACCTTGTTAG AATCCCTGCT TGCCCTCATT 4620

GTCATCAGTG GGGGATTACT CCTTTTTCAA GCTATGAGTC AGCTCCTCAT TTCAGAAGTT 4680

CGCTACCAGC AACAAAGCGA GCAAAAGGAG TGGCTCTTGT TTGTGGACCA ACTTGAGGTA 4740

GAATTAGACC GTTCGCAGTT CGAAAAAGTA GAAGGCAATC GCCTATACAT GAAGCAAGAT 4800

GGCAAGGACA TCGCCATCGG TAAGTCAAAG TCAGATGATT TCCGTAAAAC GAATGCTCGT 4860

GGTCGAGGTT ATCAGCCTAT GGTTTATGGA CTCAAATCTG TACGGATTAC AGAGGACAAT 4920

CAACTGGTTC GCTTTCATTT CCAGTTCCAA AAAGGCTTAG AAAGGGAGTT CATCTATCGT 4980

GTGGAAAAAG AAAAAAGTTA AGGCAGGTGT TCTCCTCTAC GCAGTCACCA TAGCAGCCAT 5040

CTTTAGTCTT TTGTTGCAAT TTTATTTGAA CCGACAAGTC GCCCACTATC AAGACTATGC 5100

TTTGAATAAA GAAAAATTGG TTGCTTTTGC TATGGCTAAA CGAACCAAAG ATAAGGTTGA 5160

GCAAGAAAGT GGGGAACAGT TTTTTAATCT AGGTCAGGTA AGCTATCAAA ACAAGAAAAC 5220

TGGCTTAGTG ACGAGGGTTC GTACGGATAA GAGCCAATAT GAGTTTCTGT TTCCTTCAGT 5280

CAAAATCAAA GAAGAGAAAA GAGATAAAAA GGAAGAGGTA GCGACCGATT CAAGCGAAAA 5340

AGTGGAGAAG AAAAAATCAG AAGAGAAGCC TGAAAAGAAA GAGAATTCAT AGTCAATTCA 5400

ACTATAATGC GTTGAATCCA GAATAGTCCA CTGTAGTTTC TAGAAAATTG CTGGAAATGG 5460

ATGTTAAGCT CCAATTCATT TGTTTATATC TTATTTCAGT TTACTATACT TTGTGCTAAA 5520

TTAAAGATAT GAAACATGAT TTTAACCACA AAGCAGAAAC TTTCGATTCC CCTAAAAATA 5580

TCTTCCTCGC AAACTTGGTA TGTCAAGCAG CCGAGAAACA GATTGATCTT CTATCAGACA 5640

AAGAAATTTT AGATTTCGGT GGTGGCACGG GTCTATTAGC CTTGCCCCTA ACCCCTAGCC 5700

AAGCAGGCTA AGTCAGTCAC TCTTGTAGAC ATTTCTGAGA AAATGTTGGA GCAAGCTCGT 5760

TTGAAAGTGG AGCAGCAAGC AATCAAGAAT ATCCAGTTTT TGGAGCAAGA TTTACCGAAA 5820

AATCCCTTGG AGAAAGAGTT TGATTGCCTT GCTGTTAGTC GGGTTCTTCA TCATATGCCT 5880

GATTTGGATG CGGCTCTCTC ACTGTTTCAT CAACATTTGA AGGAAGATGG GAAACTCATC 5940

ATTGCTGATT TTACCAAGAC AGAAGCTAAT CATCATGGAT TTGATTTAGC TGAACTGGAA 6000

AACAAGCTAA TTGAGCATGG TTTTTCATCT GTGCATAGTC AGATTCTCTA TAGTGCTGAA 6060

GACCTGTTTC AAGGAAATCA CTCAGAATTC TTTTTAATAG TAGCCCAAAA ATCACTCGCC 6120

TAGTCAGGGA GTGATTTTTC TATAAGGATG GAAAAAAGAA GGGAAATTTG GTAAGATAGG 6180

AATATGGATT TTGAAAAAAT TGAACAAGCT TATACCTATT TACTAGAGAA TGTCCAAGTC 6240

ATCCAAAGTG ATTTGGCGAC CAACTTTTAT GACGCCTTGG TGGAGCAAAA TAGCATCTAT 6300

CTGGATGGTG AAACTGAGCT AAACCAGGTC AAGGAGAACA ATCAAACCCT TAAGCGTTTA 6360

GCACTACGCA AAGAAGAATG GCTCAAGACC TACCAGTTTC TCTTGATGAA GGCTGGGCAA 6420

ACAGAACCCT TGCAGGCCAA TCACCAGTTT ACACCGGATG CTATTGCTTT GCTTTTGGTG 6480

TTTATTGTGG AAGAGTTGTT TAAAGAGGAG GAAATTACTA TCCTCGAAAT GGGTTCTGGG 6540

ATGGGAATTC TAGGCGCTAT TTTCTTGACC TCGCTTACTA AAAAGGTGGA TTACTTGGGA 6600

ATGGAAGTGG ATGATTTGCT GATTGATCTG GCAGCTAGCA TGGCAGATGT AATTGGTTTG 6660

CAGGCTGGCT TTGTCCAAGG AGATGCCGTT CGCCCACAAA TGCTCAAAGA AAGCGATGTG 6720

GTCATCAGTG ACTTGCCTGT CGGCTATTAT CCTGATGATG CCGTTGCGTC GCGCCATCAA 6780

GTTGCTTCTA GCCAAGAACA TACTTACGCC CATCACTTGC TCATGGAACA AGGGCTTAAG 6840

TACCTCAAGT CAGACGGATA CGCTATTTTT CTAGCTCCGA GTGATTTGTT GACCAGTCCT 6900

CAAAGTGATT TGTTAAAAGA ATGGCTGAAA GAAGAGGCGA GTCTGGTTGC TATGATTAGT 6960

CTGCCTGAAA ATCTCTTTGC TAATGCCAAA CAATCTAAGA CTATTTTTAT CTTACAGAAG 7020

AAAAATGAAA TAGCAGTAGA GCCTTTTGTT TATCCACTTG CTAGCTTGCA AGATGCAAGT 7080

GTTTTAATGA AATTTAAAGA AAATTTTCAA AAATGGACTC AAGGTACTGA AATATAAAAT 7140

AGATTTTGTT ATAATAGTTG AAAACGCTTA AAAAGGGGTA TCATGTTATG ACAAAAACAA 7200

TTGCAATCAA TGCAGGAAGT TCAAGTTTGA AATGGCAATT ATACTTAATG CCAGAAGAAA 7260

AAGTATTGGC GAAAGGTTTG ATTGAACGTA TCGGTTTGAA AGATTCAATT TCAACTGTAA 7320

AATTTGACGG CCGTTCTGAA CAACAAATTT TGGATATTGA AAATCATATA CAAGCCGTTA 7380

AAATTTTATT GGATGACTTG ATTCGTTTCG ATATTATCAA GGCTTATGAC GAGATTACAG 7440

GTGTTGGACA TCGTGTTGTT GCTGGTGGAG AATATTTCAA AGAATCAACA GTTGTTGAGG 7500

GAGATGTTTT AGAAAAAGTT GAAGAGTTGA GTTTGTTGGC TCCTCTACAC AACCCGGCCA 7560

ATGCAGCAGG TGTTCGTGCC TTCAAGGAAT TGTTGCCAGA CATTACCAGT GTAGTTGTTT 7620

TTGATACTTC CTTCCACACA AGTATGCCAG AGAAAGCTTA TCGCTACCCT CTACCAACAA 7680

AATATTACAC AGAAAACAAG GTTCGTAAAT ACGGTGCTCA TGGTACAAGT CACCAGTTTG 7740

TAGCAGGAGA AGCTGCAAAA CTCTTGGGAC GTCCATTAGA AGACTTGAAG TTAATTACCT 7800

GTCATATTGG TAACGGAGGC TCAATTACAG CTGTGAAAGC CGGCAAATCT GTAGACACTT 7860

CTATGGGGTT CACTCCTCTT GGTGGTATTA TGATGGGAAC GCGTACAGGG GATATTGATC 7920

CAGCTATCAT TCCTTATTTA ATGCAATATA CAGAGGATTT TAACACACCA GAAGATATCA 7980

GTCGTGTTCT TAACCGTGAA TCAGGTCTTT TGGGAGTTTC TGCTAATTCT AGCGATATGC 8040

GCGATATAGA AGCAGCTGTA GCAGAAGGGA ATCACGAGGC TAGCTTGGCT TATGAAATGT 8100

ATGTTGACCG TATCCAAAAA CATATCGGTC AGTACCTTGC AGTGCTAAAT GGAGCAGATG 8160

CCATTGTTTT CACAGCAGGT GTCGGTGAAA ATGCAGAGAG TTTCCGTCGT GATGTAATCT 8220

CAGGGATTTC GTGGTTTGGT TGTGATGTTG ATGATGAAAA GAATGTCTTT GGCGTTACAG 8280

GAGACATCTC AACAGAGGCA GCTAAAATCC GTGTCTTGGT TATTCCAACA GATGAAGAAT 8340

TAGTCATTGC CCGTGACGTT GAACGCTTGA AAAAATAAGT GAAACTAAAA AAATATTCAA 8400

TACAAGGAGT TGGGAAAGTT ATTTTTCCAG CTTCTTTTTC TGATGAAATT GTCCAAAACC 8460

TTGCTATGAT TGGCTTTTTT GAAAAATATG GTATAATAGT AGTAATTTAA TAGATGGAGT 8520

TGAGTTTTGA AGAAAAACTT TCGTGTAAAA AGAGAGAAAG ATTTTAAGGC GATTTTCAAG 8580

GAGGGGACAA GTTTTGCTAA TCGCAAATTT GTGGTCTACC AATTAGAAAA CCAGAAAAAC 8640

CGTTTTCGAG TAGGTCTATC AGTTAGCAAA AAACTGGGGA ATGCCGTCAC TAGAAATCAA 8700

ATTAAGCGAC GGATTCGGCA TATTATCCAG AATGCAAAAG GGAGTCTGGT AGAAGATGTC 8760

GACTTTGTTG TCATTGCTCG AAAAGGAGTC GAAACCTTGG GATACGCAGA GATGGAGAAA 8820

AATCTACTCC ATGTATTAAA ATTATCAAAG ATTTACCGGG AAGGAAATGG GAGTGAAAAA 8880

GAAACTAAAG TTGACTAGTT TGCTAGGACT GTCTCTGTTA ATCATGACAG CCTGTGCGAC 8940

TAATGGGGTA ACTAGCGATA TTACAGCCGA ATCGGCTGAT TTTTGGAGTA AATTGGTTTA 9000

CTTCTTTGCG GAAATCATTC GCTTTTTATC GTTTGATATT AGTATCGGAG TGGGGATTAT 9060

TCTCTTTACG GTCTTGATTC GTACAGTCCT CTTGCCAGTC TTTCAGGTGC AAATGGTGGC 9120

TTCTAGGAAA ATGCAGGAAG CTCAGCCACG CATTAAGGCG CTTCGAGAAC AATATCCAGG 9180

TCGAGATATG GAAAGCAGAA CCAAACTAGA GCAGGAAATG CGTAAAGTAT TTAAAGAAAT 9240

GGGTGTCAGA CAGTCAGACT CTCTTTGGCC GATTTTGATT CAGATGCCGG TTATTTTGGC 9300

CCTGTTCCAA GCCCTATCAA GAGTTGACTT TTTAAAGACA GGTCATTTCT TATGGATTAA 9360

CCTTGGTAGT GTGGATACAA CCCTTGTTCT TCCGATTTTA GCAGCAGTAT TCACCTTTTT 9420

AAGTACTTGG TTGTCCAACA AAGCTTTGTC TGAGCGAAAT GGCGCTACGA CTGCGATGAT 9480

GTATGGGATT CCAGTCTTGA TTTTTATCTT TGCAGTTTAT GCGCCAGGTG GAGTCGCCCT 9540

ATACTGGACA GTGTCTAATG CTTATCAAGT CTTGCAAACC TATTTCTTGA ATAATCCATT 9600

CAAGATTATC GCAGAGCGCG AGGCCGTAGT ACAGGCACAA AAAGATTTGG AAAATAGAAA 9660

AAGAAAAGCC AAGAAAAAGG CTCAGAAAAC GAAATAAATA AGGAGGAATC TGGTAGTGGT 9720

AGTATTTACA GGTTCAACTG TTGAAGAAGC AATCCAGAAA GGATTGAAAG AATTAGATAT 9780

TCCAAGAATG AAGGCTCATA TCAAAGTCAT TTCTAGGGAG AAAAAAGGCT TTCTTGGTCT 9840

ATTTGGTAAA AAACCAGCCC AAGTGGATAT TGAAGCGATT AGTGAAACGA CTGTTGTCAA 9900

AGCAAATCAA CAGGTAGTAA AAGGCGTTCC GAAAAAAATC AATGATTTGA ACGAGCCTGT 9960

GAAGACGGTT AGTGAAGAAA CCGTTGACCT TGGTCATGTG GTTGATGCTA TTAAAAAAAT 10020

AGAGGAAGAA GGTCAAGGTA TTTCTGATGA AGTCAAGGCT GAAATCTTAA AACATGAAAG 10080

ACATGCCAGC ACTATCTTAG AAGAAACTGG TCACATTGAG ATTTTAAATG AACTTCAAAT 10140

CGAGGAAGCG ATGAGGGAAG AAGCAGGCGC TGATGACCTT GAAACTGAGC AAGACCAAGC 10200

TGAAAGTCAA GAACTAGAAG ACTTGGGCTT GAAAGTTGAA ACGAACTTTG ATATTGAACA 10260

AGTAGCTACG GAAGTAATGG CTTATGTTCA AACGATTATT GATGACATGG ATGTTGAGGC 10320

TACACTTTCA AATGATTATA ACCGTCGTAG CATCAATCTA CAAATTGACA CCAACGAACC 10380

AGGTCGTATT ATCGGCTACC ATGGTAAAGT CTTGAAGGCC TTGCAACTGT TGGCTCAAAA 10440

TTATCTTTAC AACCGCTATT CCAGAACCTT CTACGTTACA ATCAATGTCA ATGATTATGT 10500

CGAACACCGT GCAGAAGTCT TGCAGACCTA TGCGCAAAAA TTGGCGACTC GTGTTTTGGA 10560

AGAAGGGCGC AGTCATAAAA CAGATCCAAT GTCAAATAGC GAACGCAAGA TTATCCATCG 10620

TATTATTTCA CGTATGGATG GCGTGACTAG TTACTCTGAA GGTGATGAGC CAAATCGCTA 10680

TGTTGTTGTA GATACAGAAT AAGTAAAATC AGGTTTATCC TGATTTTTTG CTAGTTAGAG 10740

GAGGTTAAAC TGATGTTGAA TAAGATAAGA GACTATTTAG ACTTTGCTGG TTTGCAGTAC 10800

CGTAATCCTG ATAAAGCGGG AGCAGAGCGA GAGAAGATGC TGGCATTCCG CCACAAAGGA 10860

CAAGAGGCCC GAAAGGTTTT TACAGAACTG GCCAAAGCCT TTCAAGCAAG CCATCCAGAA 10920

TGGCAACTCC AACAGACTAG CCAGTGGATG AATCAGGCCC AGCGTTTGAG ACCACATTTT 10980

TGGGTTTATC TACAGAGAGA CGGACAAGTG ACAGAACCTA TGATGGCCTT ACGTTTGTAT 11040

GGGACATCTA CTGACTTTGG AATTTCTTTG GAAGTCAGTT TCATCGAACG TAAGAAGGAT 11100

GAGCAAACAC TGGGCAAGCA GGCCAAAGTT TTAGACATTC CAACCGTTAA AGGGATTTAT 11160

TATCTAACCT ACTCTAATGG TCAAAGTCAA CGGTGGGAGG CGAATGAAGA AAAGCGTCGT 11220

ACTTTACGCG AGAAGGTGAG AAGTCAAGAA GTTCGAAAAG TTTTAGTGAA GGTAGATGTT 11280

CCTATGACAG AAAATTCGTC TGAAGAAGAA ATCGTAGAAG GCTTATTGAA GTCTTATTCT 11340

AAAATTCTTC CCTATTATCT AGCTACGAGA AAATAAGATA ATTTGTAAAA CATCATAAAT 11400

CATACAGTCC AAGAGTGAAC AGTCCGCTGT GTAATTCTTG GTCTTTTTGT TTGCGCTTTC 11460

GCATTATATA ATAAACTTAC AAAAACAATT CAAAAGGAGA ACAATTATGG AAGTCGTTTC 11520

AAGTGTTCTA AATTGGTTTT CTAGCAATAT TTTGCAGAAT CCCGCATTTT TCGTAGGTTT 11580

ATTGGTGTTG ATAGGATATG CACTTTTGAA AAAACCTGCC CATGACGTTT TTTCAGGGTT 11640

TGTTAAAGCA ACAGTAGGGT ATATGTTGCT TAACGTGGGT GCTGGTGGTT TGGTTACAAC 11700

CTTTCGTCCA ATCTTAGCAG CTCTTAACTA CAAATTCCAA ATTGGTGCAG CGGTTATCGA 11760

CCCTTACTTT GGACTTGCTG CAGCAAACAA CAAAATTGTA GCAGAGTTTC CAGATTTTGT 11820

TGGAACTGCA ACTACAGCTC TATTGATTGG TTTTGGAATA AATATCTTGC TCGTAGCTCT 11880

TCGAAAGATT ACGAAGGTAA GAACCCTCTT TATTACTGGT CACATCATGG TACAACAAGC 11940

TGCAACAGTA TCTCTTATGG TTCTATTCTT AGTACCACAA TTGCGCAATG CTTACGGTAC 12000

AGCAGCGATT GGTATCATCT GTGGACTTTA CTGGGCAGTT AGTTCAAATA TGACTGTTGA 12060

GGCAACTCAA CGCTTGACTG GTGGTGGCGG ATTTGCGATT GGTCACCAAC AGCAATTTGC 12120

AATCTGGTTT GTAGATAAAG TAGCAGGACG CTTTGGTAAG AAAGAAGAAA GTTTAGACAA 12180

TCTTAAATTA CCTAAGTTCC TCTCAATCTT CCACGATACA GTTGTTGCAT CTGCTACCTT 12240

GATGCTCGTA TTCTTCGGAG CCATTCTTTT AATCTTGGGT CCAGACATTA TGTCTAATAA 12300

AGAAGTCATC ACTTCAGGAA CTCTATTCAA TCCTGCTAAA CAAGATTTCT TTATGTACAT 12360

TATCCAAACA GCCTTTACCT TCTCAGTTTA CTTGTTCGTT TTGATGCAAG GTGTCCGAAT 12420

GTTCGTATCT GAGTTGACAA ACGCCTTCCA AGGTATTTCA AACAAATTGT TGCCAGGTTC 12480

ATTCCCAGCG GTTGACGTTG CAGCTTCTTA TGGATTTGGT TCTCCAAATG CTGTCTTGTC 12540

AGGATTTACC TTTGGTTTGA TTGGTCAATT GATTACAATT GTTTTGCTCA TCGTCTTTAA 12600

AAATCCGATT CTTATTATTA CAGGATTTGT ACCAGTGTTC TTTGACAATG CAGCCATTGC 12660

GGTCTACGCT GATAAACGCG GCGGATGGAA AGCGGCTGTT ATCCTTTCCT TTATATCAGG 12720

TGTCCTTCAA GTTGCTCTAG GAGCTCTTTG TGTGGCCCTT CTCGATTTGG CATCTTATGG 12780

TGGCTACCAT GGAAATATCG ACTTTGAATT CCCATGGCTT GGATTTGGAT ATATCTTCAA 12840

ATACCTTGGT ATTGTTGGTT ATGTACTTGT GTGTCTCTTC TTGCTTGTTA TTCCTCAACT 12900

TCAATTTGCC AAAGCAAAAG ATAAAGAGAA ATATTACAAC GGTGAAGTTC AAGAAGAAGC 12960

TTAGTATCTA GAAAAGGAGA AATAAAATGG TTAAAGTATT AGCAGCGTGC GGAAATGGAA 13020

TGGGTTCATC AATGGTTATC AAGATGAAGG TTGAAAATGC TCTCCGTAAG CTTAATCAAA 13080

CAGATTTTAC AGTCAATTCA TGCAGTGTCG GTGAAGCTAA AGGTTTAGCA GTAGGATATG 13140

ACATCGTAAT CGCTTCTCTT CATTTGATTC AAGAATTGGA AGGGCGAACT AATGGGAAGT 13200

TAATTGGGCT TGATAACTTG ATGGATGATA AAGAAATCAC CGAAAAACTC AGTCAAGCAC 13260

TACAGTAAAA GGTTGGAGGG GGCTGGACAG AAACTGAGAG TTATCGTTTC TGTCCTTCTC 13320

CCTCTTTAAA TAAAGGAGGC AGATATGAAT TTAAAACAAG CTTTAATTGA CAATGACTCG 13380

ATCCGACTAG GTTTAGAGGC TAACAATTGG AAAGAAGCAG TCAAGGTAGC AGTAGATCCC 13440

TTAATTGAAA GTGGGGCAAT TTTGCCAGAG TATTACGATG CTATCATTGA ATCGACTGAA 13500

GAGTATGGGC CTTACTATAT CTTGATGCCA GGTATGGCTA TGCCCCACGC TAGACCTGAA 13560

GCAGGTGTGC AAAGTGATGC CTTTTCATTG ATTACCTTAC AAAATCCTGT TGTATTTTCA 13620

GATGGGAAAG AGGTATCTGT TTTGTTGGCA CTAGCAGCAA CAAGTTCAAA AATTCACACA 13680

AGTGTAGCCA TTCCACAAAT TATTGCCCTA TTTGAATTAG AAGATTCTAT TGCACGTTTA 13740

CAGGCTTGCC AGACTAAAGA AGATGTCTTG GCTATGATTG AAGAATCTAA GGATAGCCCT 13800

TATCTCGAAG GATTGGATTT GGAAAGTTAG AAAGAGGAAT AAAGAAATGA CAAAAAGAAT 13860

ACCTAATTTA CAAGTTGCAT TAGACCATTC AGACTTGCAA GGAGCGATTA AAGCAGCTGT 13920

TTCTGTTGGT CAGGAAGTAG ATATTATCGA AGCTGGAACT GTTTGCTTGC TTCAAGTTGG 13980

AAGTGAACTG GCTGAAGTCT TGCGTAGCCT TTTCCCAGAT AAGATTATTG TGGCAGACAC 14040

AAAATGTGCT GATGCTGGTG GAACAGTTGC TAAAAATAAT GCGGTTCGTG GAGCAGACTG 14100

GATGACTTGT ATCTGTTGTG CAACCATCCC TACTATGGAA GCAGCTCTAA AGGCTATCAA 14160

GACTGAACGA GGAGAACGAG GCGAAATCCA GATCGAGCTT TATGGCGATT GGACTTTTGA 14220

ACAAGCTCAG CTTTGGCTAG ATGCAGGTAT CTCACAAGCT ATTTATCACC AATCTCGTGA 14280

TGCTCTTCTT GCTGGTGAAA CTTGGGGTGA AAAAGACCTT AATAAGGTTA AAAAACTCAT 14340

TGACATGGGC TTCCGTGTAT CTGTAACAGG TGGTCTAGAT GTAGATACTC TCAAACTCTT 14400

TGAAGGTATT GATGTCTTTA CCTTTATCGC AGGTCGTGGA ATTACAGAGG CTGTGGATCC 14460

AGCAGGAGCA GCGCGTGCCT TCAAGGATGA AATCAAACGA ATTTGGGGGT AAATCATGGT 14520

ACGTCCAATT GGAATTTATG AAAAGGCAAC CCCAACACAC TGTACTTGGC TAGAACGTTT 14580

AAATTTTGCC AAGGAGTTAG GCTTTGATTT TGTCGAGATG TCTATTGACG AACGTGACGA 14640

GCGTTTAGCA AGACTTGACT GGAGTAAGGA AGAACGCTTG GAAGTTGTCA AAGCAATCTA 14700

TGAAACTGGT GTTCGTATTC CTTCTATCTG TTTTTCAGGC CATCGTCGCT ACCCATTGGG 14760

TTCAAAAGAT CCAGTTCTAG AGGAAAAATC TCTAGAACTC ATGAAAAAAT GTATCGAATT 14820

AGCTCAAGAC TTGGGAGTTC GTACGATTCA ATTAGCTGGT TACGATGTTT ACTATGAGGA 14880

AAAGTCACCC CAGACACGCC AACGTTTTAT CAAAAATTTG AGAAAAGCCT GTGACTGGGC 14940

TGAAGAAGCT CAGGTGGTAC TTGCTATTGA AATTATGGAT GATCCTTTCA TCAGTAGCAT 15000

CGAAAAATAT TTGGCTATAG AAAAAGAGAT TGACTCTCCC TTCCTCTTTG TATATCCAGA 15060

TATTGGTAAT GTGTCTGCAT GGCATAATGA TATCTATAGT GAGTTTTATC TTGGTCATCA 15120

TGCCATCGCA GCTCTCCATC TCAAGGATAC TTATGCAGTG ACAGAAAGTT CAAAGGGCCA 15180

GTTCCGAGAT GTACCTTTCG GGCAAGGTTG TGTCAAATGG GAAGAAGCTT TCGATATTTT 15240

AAAGGAAACC AATTATAATG GACCTTTCCT AATCGAAATG TGGTCTGAAA ATTGTGAAAC 15300

AGTAGAAGAA ACACGCGCAG CCATTCAAGA GGCGCAAGCT TTTCTCTATC CACTCATTAA 15360

GAAAGCAGGT TTGATGTAAG ATGAATCAAG TAATCAATGC TATGCGTAAA CGAGTCTGTG 15420

ATGCCAATCA ATCATTGCCA AAACATGGAC TTGTCAAATT TACCTGGGGG AATGTATCTG 15480

AAGTTAATCG CGAACTCGGT GTCATTGTTA TCAAACCATC AGGCGTGGAT TATGACGAAT 15540

TGACACCTGA AAACATGGTA GTGACTGATC TAGATGGTAA GATCCTAGAA GGGGATTTAA 15600

GACCATCTTC CGACCTCCCA ACTCATGTGC AATTATATAA GACTTGGTCA GAAATTGGTA 15660

GTGTGGTTCA CACCCATTCG ACAGAAGCTG TTGGTTGGGC TCAGGCAGGT CGTGATATTC 15720

CTTTCTACGG AACAACCCAT GCAGATTATT TCTACGGTTC AATCCCTTGC GCCCGTAGTT 15780

TGACCAAGGA CGAAGTAGAA GTGGCCTATG AAAAAGATAC TGGCCTGGTT ATCGTAGAAG 15840

AGTTTGAACA TCGCGGACTT AACCCGGTTG AAGTACCAGG AATTGTTGTA CGCAATCACG 15900

GTCCATTCAC CTGGGGCAAA AATCCAGAGA ATGCTGTTTA TCACTCTGTC GTACTAGAGG 15960

AAGTATCAAA GATGAATCGC TTTACAGAAC AAATCAATCC AAGAGTTGGA CCTGCTCCCC 16020

AGTACATACT AGAAAAACAC TACCAACGTA AACATGGACC AAATGCTTAT TATGGTCAAA 16080

AGTAAGAACG ATGAAGGAGG AGAAAAAGAT AAATTTAGCT CCTCTTTTTA CATTTGATTT 16140

TTATTGAGAG TAAAGTTGGA GTTGAAGTAA TTTTAAAAGA TTTTTTAGAA ATAGCGCTTG 16200

ATATATATAT GGTAAAATAA AAAGAATTGC TGTGATATCA ATAGATTTGG GGGATTTTTT 16260

AATATGGTAC TGGATAAGGC AAGTTGTGAT TTGCTTCAAT ATTTGATGGA TCAAGAAACG 16320

TCCAAAACGA TTATGGCGAT TTCGAAAGAT TTGAAAGAGT CAAGAAGGAA AATTTATTAT 16380

CACATTGACA AAATCAATGC TGCTCTGGGT GACGAGGCGC TTCACATCAT TAGTATTCCA 16440

CGAATTGGTA TTCACTTAAC GGAAGAGCAG AGAGATGCTT GTTGTAAACT ATTATCGGAA 16500

GTAGATTCGT ACGATTATAT CATGAGTGCG CATGAACGTA TGATGATAAT GTTACTATGG 16560

ATAGGTATTT CTAAAGAACG TATTACGATT GAAAAATTGA TAGAGTTAAC AGAGGTATCT 16620

AGGAATACTG TTCTCAATGA TTTGAATAGT ATTCGTTATC AACTAACTTT GGAACAATAT 16680

CAGGTGATCT TGCAAGTGAG CAAGTCACAG GGATACAACC TTCATGCCCA CCCTCTTAAT 16740

AAAATTCAGT ATCTTCAATC GCTTCTATAT CATATTTTTA TGGAAGAAAA TGCCACTTTT 16800

GTATCTATTT TAGAAGATAA GATGAAAGAG AGGTTAGATG ATGAGTGTTT GCTTTCTGTT 16860

GAAATGAACC AATTTTTTAA GGAACAGGTT CCTTTAGTTG AACAAGATTT AGGGAAGAAA 16920

ATAAACCATC ATGAAATAAC TTTTATGTTG CAGGTTCTAC CTTATTTGCT GTTAAGCTGT 16980

CATAATGTTG AACAGTATCA AGAAAGACAT CAGGATATAG AGAAAGAATT TTCTTTGATA 17040

AGAAAAAGAA TAGAGTATCA GGTGTCTAAG AAATTAGGAG AACGGTTGTT TCAAAAGTTT 17100

GAAATTTCTT TGTCAGGACT TGAAGTTTCT CTTGTAGCTG TTCTCCTCCT CTCCTATCGT 17160

AAAGATTTGG ATATTCATGC AGAAAGTGAT GATTTTCGGC AATTAAAACT TGCTTTAGAA 17220

GAATTTATCT GGTATTTTGA ATCACAAATC CGAATGGAGA TTGAGAACAA GGATGATTTG 17280

TTACGAAATT TGATGATCCA CTGTAAAGCC TTGTTATTTA GAAAGACTTA CGGTATTTTT 17340

TCTAAAAATC CTCTAACAAA ACAAATTCGA TCCAAGTATG GAGAATTATT TTTAGTCACT 17400

AGAAAATCTG CGGAAATTTT AGAAGGAGCA TGGTTTATTC GGCTAACAGA CGATGATATT 17460

GCCTATTTGA CGATTCATAT TGGAGGATTT TTAAAATATA CACCATCATC TCAAAAAAAT 17520

ATGAAAAAAG TTTATCTCGT TTGTGATGAA GGTGTTGCGG TTTCGAGACT TTTGCTGAAA 17580

CAATGCAAAC TTTATTTTCC AAATGAGCAA ATTGACACTG TATTTACAAC AGAACAATTT 17640

AAGAGTGTGG AAGATATTGC ACAAGTTGAT GTAGTGATTA CTACTAATGA TGATTTGGAT 17700

AGCAGATTTC CGATTTTAAG GGTTAATCCT ATCCTTGAAG CAGAAGATAT TTTGAAAATG 17760

CTAGACTATC TTAAACACAA TATATTTCGT AATAAGAGCA AAAGTTTCAG TGAAAATCTT 17820

TCTAGTCTTA TTTCGTCTTA TATTGTAGAC AGCAAGTTGG CTAGTAAGTT CCAAGAAGAG 17880

GTTCAAACAC TTATAAATCA AGAAATAGTA GTTCAAGCTT TTTTGGAAGr TATTTGAAGG 17940

ACAGTCCAAT GATGAACACA AACCTGTGTk TTTCsTGGTC TTTTtTAGTG TTTTGAAGGG 18000

TGGkATACTA ATCTCAAAGA TAACAATTAT ATCCAAAGGA GGCAACATAT GCCAAACGTC 18060

AAAGAAATTA CAAGAGAGTC ATGGATTTTA GCCACTTTCC CAGAGTGGGG AACATGGTTG 18120

AACGAAGAAA TCGAAGAAGA AGTCGTACCT GAAGGCAACT TTGCCATGTG GTGGCTAGGC 18180

AACTGTGGTA CTTGGATTAA GACACCAGCT GGTGCTAACG TTGTCATGGA CCTTTGGTCA 18240

AACCGTGGAA AATCAACCAA AAAAGTGAAA GATATGGTTC GTGGGCACCA AATGGCAAAT 18300

ATGGCAGGTG TTCGTAAGCT GCAACCAAAC TTGCGTGTTC AGCCAATGGT TATCGATCCA 18360

TTTGCTATCA ACGAACTAGA CTATTACTTA GTTTCACACT TCCACAGTGA TCATATCGAC 18420

CCATACACAG CTGCAGCAAT TCTCAATAAT CCTAAGTTAG AGCATGTTAA GTTGG 18475

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7186 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

CCAGGATTTG GTACCGTTGC AAGTGGTGTG CCTTTCCTCC TAAAGGAAAA TGGAGGAAAA 60

ATCAATCAAT CAGCACATTC AGATATCAAA GTTGCTAAGG TATTGGTCAA GGATGAAGAT 120

GAAAAAAATC GCTTGCTTGC AGCAGGGAAT GACTTTAACT TTGTAACCAA TGTGGATGAT 180

ATTTTATCAG ACCAGGATAT TACTATCGTA GTGGAATTGA TGGGGCGTAT TGAGCCTGCT 240

AAAACCTTTA TCACTCGTGC CTTGGAAGCT GGAAAACACG TTGTTACTGC TAACAAGGAC 300

CTTTTAGCTG TCCATGGCGC AGAATTGCTA GAAATCGCTC AAGCTAACAA GGTAGCACTT 360

TACTACGAAG CAGCAGTTGC TGGTGGGATT CCAATTCTTC GTACTTTAGC AAATTCCTTG 420

GCTTCTGATA AAATTACGCG CGTGCTTGGA GTAGTCAACG GAACTTCCAA CTTCATGGTG 480

ACCAAGATGG TGGAAGAAGG CTGGTCTTAC GATGATGCTC TTGCGGAAGC ACAACGTCTA 540

GGATTTGCAG AAAGCGATCC GACGAATGAC GTAGATGGGA TTGATGCAGC CTACAAGATG 600

GTTATTTTGA GCCAATTTGC CTTTGGCATG AAGATTGCCT TTGATGATGT AGCCCACAAG 660

GGAATCCGCA ATATCACACC AGAAGACGTA GCTGTAGCTC AAGAGCTTGG TTACGTAGTG 720

AAATTGGTTG GTTCTATTGA GGAAACTTCT TCAGGTATTG CTGCAGAAGT GACTCCAACC 780

TTCCTACCTA AAGCGCACCC ACTTGCTAGT GTGAATGGCG TAATGAACGC TGTCTTTGTA 840

GAATCTATCG GTATTGGTGA GTCTATGTAC TACGGACCAG GTGCGGGTCA AAAACCAACT 900

GCAACAAGTG TTGTAGCTGA TATTGTCCGT ATCGTTCGTC GTTTGAATGA TGGTACTATT 960

GGCAAAGACT TCAACGAATA TAGCCGTGAC TTGGTCTTGG CAAATCCTGA AGATGTCAAA 1020

GCAAACTACT ATTTCTCAAT CTTGGCTCTA GACTCAAAAG GTCAGGTCTT GAAGTTGGCT 1080

GAAATCTTCA ATGCTCAAGA TATTTCCTTT AAGCAAATCC TTCAAGATGG CAAAGAGGGT 1140

GACAAGGCGC GTGTCGTTAT CATCACACAC AAGATTAATA AAGCCCAGCT TGAAAATGTC 1200

TCAGCTGAAT TGAAGAAGGT TTCAGAATTC GACCTCTTGA ATACCTTCAA GGTGCTAGGA 1260

GAATAAGATG AAGATTATTG TACCTGCAAC CAGTGCCAAT ATCGGGCCAG GTTTTGACTC 1320

GGTCGGTGTA GCTGTAACCA AGTATCTTCA AATTGAGGTC TGCGAAGAAC GAGATGAGTG 1380

GCTGATTGAA CACCAGATTG GCAAATGGAT TCCACATGAC GAGCGTAATC TCTTGCTCAA 1440

AATCGCTTTG CAAATTGTAC CAGACTTGCA ACCAAGACGC TTGAAAATGA CCAGTGATGT 1500

CCCTTTGGCG CGCGGTTTGG GTTCTTCCAG CTCGGTTATC GTTGCTGGGA TTGAACTAGC 1560

CAACCAACTG GGTCAACTCA ACTTATCAGA CCATGAAAAA TTGCAGTTAG CGACCAAGAT 1620

TGAAGGGCAT CCTGACAATG TGGCTCCAGC CATTTATGGT AATCTCGTTA TTGCAAGTTC 1680

TGTTGAAGGG CAAGTCTCTG CTATCGTAGC AGACTTTCCA GAGTGTGATT TTCTAGCTTA 1740

CATTCCAAAC TATGAATTAC GTACTCGCGA CAGCCGTAGT GTCTTGCCTA AAAAATTGTC 1800

TTATAAGGAA GCTGTTGCTG CAAGTTCTAT CGCCAATGTA GCGGTTGCTG CCTTGTTGGC 1860

AGGAGACATG GTGACCGCTG GGCAAGCAAT CGAGGGAGAC CTCTTCCATG AGCGCTATCG 1920

TCAGGACTTG GTAAGAGAAT TTGCGATGAT TAAGCAAGTG ACCAAAGAAA ATGGGGCCTA 1980

TGCAACCTAC CTTTCTGGTG CTGGGCCGAC AGTTATGGTT CTGGCTTCTC ATGACAAGAT 2040

GCCAACAATT AAGGCAGAAT TGGAAAAGCA ACCTTTCAAA GGAAAACTGC ATGACTTGAG 2100

AGTTGATACC CAAGGTGTCC GTGTAGAAGC AAAATAAAGA ATAGAAGATA GGATGGGGAA 2160

ACTCTTGACC AGAGGGGTTC ATATCCTTTT TGTGAAAAGA AGTTTATACT CAATGAAAAT 2220

CAAAGAGCAA ACTAGGAAGC TAGCCGCAGG CTGCTCAAAA CAGTGTTTTG AGGTTGCAGA 2280

TAGAACTGAC GAAGTCAGCT CAAGACACTG TTTTGAGGTT GCAGATAGAA CTGACGAAGT 2340

CAGTAACCAT ACTACGGTAA GGTGACGCTG ACGTGGTTTG AAGAGATTTT CGAAGAGTAT 2400

TAGTTAAAAA CGTGATAAAG GAGAAATAAA GATGGCAGAA ATTTATCTAG CAGGTGGTTG 2460

TTTTTGGGGC CTAGAGGAAT ATTTTTCACG CATTTCTGGA GTGCTAGAAA CCAGTGTTGG 2520

CTACGCTAAT GGTCAAGTCG AAACGACCAA TTACCAGTTG CTCAAGGAAA CAGACCATGC 2580

AGAAACGGTC CAAGTGATTT ACGATGAGAA GGAAGTGTCA CTCAGAGAGA TTTTACTTTA 2640

TTATTTCCGA GTTATCGATC CTCTATCTAT CAATCAACAA GGGAATGACC GTGGTCGCCA 2700

ATATCGAACT GGGATTTATT ATCAGGATGA AGCAGATTTG CCAGCTATCT ACACAGTGGT 2760

GCAGGAGCAG GAACGCATGC TGGGTCGAAA GATTGCAGTA GAAGTGGAGC AATTACGCCA 2820

CTACATTCTG GCTGAAGACT ACCACCAAGA CTATCTCAGG AAGAATCCTT CAGGTTACTG 2880

TCATATCGAT GTGACCGATG CTGATAAGCC ATTGATTGAT GCAGCAAACT ATGAAAAGCC 2940

TAGTCAAGAG GTGTTGAAGG CCAGTCTATC TGAAGAGTCT TATCGTGTCA CACAAGAAGC 3000

TGCTACAGAG GCTCCATTTA CCAATGCCTA TGACCAAACC TTTGAAGAGG GGATTTATGT 3060

AGATATTACG ACAGGTGAGC CACTCTTTTT TGCCAAGGAT AAGTTTGCTT CAGGTTGTGG 3120

TTGGCCAAGT TTTAGCCGTC CGATTTCCAA AGAGTTGATT CATTATTACA AGGATCTGAG 3180

CCATGGAATG GAGCGAATTG AAGTTCGTTC TCGTTCAGGC AGTGCTCACT TGGGTCATGT 3240

TTTCACAGAT GGACCGCGGG AGTTAGGCGG CCTCCGTTAC TGTATCAATT CTGCTTCTTT 3300

ACGCTTTGTG GCCAAGGATG AGATGGAAAA AGCAGGATAT GGCTATCTAT TGCCTTACTT 3360

AAACAAATAA AACAGAGAGT GGGGCTTCCC ACTTTCTTCA TTTCTAGAAT ATGAATAGAA 3420

GGGATTTATG AAACACCTAT TATCTTACTT CAAACCCTAC ATCAAGGAAT CAATTTTAGC 3480

CCCCTTGTTC AAGCTGTTAG AAGCTGTTTT TGAGCTCTTG GTTCCCATGG TGATTGCTGG 3540

GATTGTTGAC CAATCTTTAC CTCAGGGAGA TCAAGGTCAT CTCTGGATGC AGATTGGCCT 3600

GCTCCTTATC TTTGCAGTAA TTGGCGTTTT AGTGGCCTTG ATAGCTCAAT TTTACTCAGC 3660

AAAGGCAGCA GTAGGTTCTG CTAAGGAATT GACAAACGAT CTTTATCGTC ATATTCTTTC 3720

CTTGCCCAAG GACAGCAGAG ACCGTCTGAC AACTTCTAGT TTGGTCACTC GCTTGACTTC 3780

GGATACCTAC CAGATTCAGA CTGGTATCAA TCAATTCCTG CGTCTCTTTT TACGAGCGCC 3840

CATTATCGTT TTTGGTGCCA TTTTTATGGC TTATCGAATC TCAGCTGAGT TGACTTTCTG 3900

GTTCTTAGTC TTGGTTGCCA TTTTGACCAT TGTCATTGTA GGGTTATCTC GATTGGTCAA 3960

TCCTTTCTAC AGTAGTCTCA GAAAGAAAAC GGACCAACTG GTTCAGGAAA CGCGCCAGCA 4020

ATTGCAAGGG ATGCGGGTTA TTCGTGCTTT TGGTCAAGAA AAACGAGAGT TACAGATTTT 4080

TCAAACCCTT AACCAAGTTT ATGCTAGATT ACAAGAAAAG ACAGGTTTCT GGTCTAGTTT 4140

ATTAACACCT CTGACCTATC TGATTGTCAA TGGAACTCTT CTCGTTATTA TCTGGCAAGG 4200

CTATATTTCA ATTCAAGGAG GAGTGCTCAG TCAAGGTGCT CTCATTGCTC TTATCAATTA 4260

CCTCTTACAG ATTTTGGTGG AATTGGTCAA GCTAGCCATG TTGATCAATT CCCTCAACCA 4320

GTCCTATATC TCAGTCAAGC GAATCGAGGA AGTCTTTGTT GAGGCTCCAG AGGATATCCA 4380

TTCAGAGTTA GAACAAAAGC AAGCTACCAG AGATAAGGTT TTACAAGTCC AAGAATTGAC 4440

CTTTACCTAT CCTGATGCGG CCCAGCCTTC TCTGAGATAC ATTTCCTTTG ATATGACTCA 4500

AGGACAAATT CTAGGTATCA TCGGGGGAAC TGGTTCTGGT AAATCAAGCT TGGTGCAACT 4560

CTTACTTGGA CTTTATCCAG TAGACAAGGG GAACATTGAC CTTTATCAAA ATGGACGTAG 4620

TCCTCTTAAT TTGGAGCAGT GGCGGTCTTG GATTGCCTAT GTACCTCAAA AGGTCGAACT 4680

CTTTAAAGGA ACCATTCGTT CCAACTTGAC TCTAGGTTTC AATCAAGAAG TATCTGACCA 4740

GGAACTCTGG CAGGCCTTGG AGATTGCGCA AGCTAAGGAT TTTGTCAGTG AAAAGGAAGG 4800

ACTCTTGGAT GCTCTAGTTG AGGCAGGGGG GCGAAATTTC TCAGGTGGAC AAAAACAAAG 4860

ATTGTCTATC GCCCGAGCAG TCTTGCGCCA GGCTCCGTTT CTCATCCTAG ATGATGCAAC 4920

CTCGGCACTG GATACCATTA CAGAGTCCAA GCTCTTGAAA GCTATTAGAG AAAATTTTCC 4980

AAACACGAGC TTAATTTTGA TCTCTCAACG AACCTCAACT TTACAGATGG CGGACCAGAT 5040

TCTCCTCTTG GAAAAAGGTG AGTTGCTAGC TGTTGGCAAG CACGATGACT TGATGAAATC 5100

CAGCCAAGTC TATTGTGAAA TCAATGCATC CCAACATGGA AAGGAGGACT AGAATGAAAC 5160

GACAAACTGT AAACCAGACG CTCAAACGTT TAGCCGTAGA TTTAGCAAGC CATCCTTTCC 5220

TCCTTTTCCT AGCCTTTCTA GGAACTATTG CCCAAGTTGG CTTATCAATT TACCTACCTA 5280

TTCTGATTGG GCAGGTCATT GACCAAGTCC TAGTGGCTGG TTCATCACCA GTTTTTTGGC 5340

AGATTTTTCT CCAGATGCTC TTGGTGGTAA TAGGAAATAC TCTGGTACAA TGGGCCAATC 5400

CTCTCCTCTA TAATCGTCTA ATCTTCTCTT ATACCAGAGA TTTACGGGAG CGAATCATCC 5460

ATAAGCTCCA TCGTTTACCG ATTGCCTTTG TAGATAGGCA AGGTAGTGGA GAGATGGTTA 5520

GTCGTGTAAC CACGGACATC GAACAGTTGG CAGCTGGCTT GACCATGATT TTTAACCAAT 5580

TTTTCATTGG TGTTTTGATG ATTTTGGTCA GTATTCTAGC CATGCTCCAA ATTCATCTCC 5640

TCATGACTCT CTTAGTCTTG CTGTTGACGC CACTGTCCAT GGTGATTTCA CGCTTTATTG 5700

CCAAGAAATC CTATCATCTC TTCCAGAAGC AAACAGAGAC GAGGGGAATT CAGACTCAGT 5760

TGATTGAAGA ATCGCTTAGT CAGCAGACTA TAATCCAGTC CTTCAATGCT CAAACAGAAT 5820

TTATCCAAAG ATTGCGTGAG GCTCATGACA ACTACTCAGG CTATTCTCAG TCAGCCATCT 5880

TTTATTCTTC AACGGTCAAT CCTTCGACTC GCTTTGTAAA TGCACTCATT TATGCCCTTT 5940

TAGCTGGAGT AGGAGCTTAT CGTATCATGA TGGGTTCAGC CTTGACCGTC GGTCGTTTAG 6000

TGACTTTTTT GAACTATGTT CAGCAATACA CCAAGCCCTT TAACGATATT TCTTCAGTGC 6060

TAGCTGAGTT GCAAAGTGCT CTGGCTTGCG TAGAGCGTAT CTATGGAGTC TTAGATAGCC 6120

CTGAAGTGGC TGAAACAGGT AAGGAAGTCT TGACGACCAG TGACCAAGTT AAGGGAGCTA 6180

TTTCCTTTAA ACATGTCTCT TTTGGCTACC ATCCTGAAAA AATTTTGATT AAGGACTTGT 6240

CTATCGATAT TCCAGCTGGT AGTAAGGTAG CCATCGTTGG TCCGACAGGT GCTGGAAAAT 6300

CAACTCTTAT CAATCTCCTT ATGCGTTTTT ATCCCATTAG CTCGGGAGAT ATCTTGCTGG 6360

ATGGGCAATC CATTTATGAT TATACACGAG TATCATTGAG ACAGCAGTTT GGTATGGTGC 6420

TTCAAGAAAC CTGGCTCACA CAAGGGACCA TTCATGATAA TATTGCCTTT GGCAATCCTG 6480

AAGCCAGTCG AGAGCAAGTA ATTGCTGCTG CCAAAGCAGC TAATGCAGAC TTTTTCATCC 6540

AACAGTTGCC ACAGGGATAC GATACCAAGT TGGAAAATGC TGGAGAATCT CTCTCTGTCG 6600

GCCAAGCTCA GCTCTTGACC ATAGCCCGAG TCTTTCTGGC TATTCCAAAG ATTCTTATCT 6660

TAGACGAGGC AACTTCTTCC ATTGATACAC GGACAGAAGT GCTGGTACAG GATGCCTTTG 6720

CAAAACTCAT GAAGGGCCGC ACAAGTTTCA TCATTGCTCA CCGTTTGTCA ACCATTCAGG 6780

ATGCGGATTT AATTCTTGTC TTAGTAGATG GTGATATTGT TGAATATGGT AACCATCAAG 6840

AACTCATGGA TAGAAAGGGT AAGTATTACC AAATGCAAAA AGCTGCGGCT TTTAGTTCTG 6900

AATAAGCCAT TCTCTTTTGA AAGTTTATGG ACGAAAAAAG TTGCCTTCGA GTGACTTTTT 6960

TGTTACAATA GCTAGAAAAA TTGTTCACTG TAATACTCAA TGAAAATCAA AGAGCAAACT 7020

AGGAAGCTAG CCGTAGGTTG CTCAAAGCAC AGCTTTGAGG TTGTAGATAA GACTGACGAA 7080

GTCAGTTCAA AACACTGTTT TGAGGTTGCA GATAGAACTG ACGAAGTCAG CTCAAAACAC 7140

TGTTTTGAGG TTGCAGATAG AACTGACGAA GTCAGCTCAA AACAGG 7186

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14273 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

CTGAAAATTC TAAAAAATTT ATAAGTAAGG AATTAATTAG TTATTTTTGT GATAAAGTTT 60

ATGATGAAAT ATTTGTTGAA GAGGTAGTTC CGCACGTTTT TCTGCCATAT GAATCTGACT 120

TACTTCTTAT TTTACCAGCT ACGGCAAATG TGATTGGCAA AATTGCTAAT GGTATTGCTG 180

ATGATTTAGT TACAGCAACT GTTTTAAACT TTAATAAAAA AATAATTTTT TGTCCCAATA 240

TGAACTCTAC TATGTGGGAC AATCACATAG TTCAAAGAAA TGTATCAATT CTAAAGGAGT 300

TGGGACATAT ATTTTTATTT GAGTCTAAAA AAACATATGA GGTAGGATTG CGTAAAGCAA 360

TAGATTCAAC ATGTTCAATG TTACAACCAC AGTCGTTAGT AAAAGAACTT ATCAAATTAG 420

AAAATATTGT CCTTGAAGAG GGACATTAAA AACTACTGAG AATATTAATG AGGGGAAAAA 480

ATGGAAAATT CATCAATCGA TGTAGATATG CTGTTGGAAG AATTGACACA AGAAGCAATG 540

GTCGTTGTTG CTGTTGATAA GGACTGTTAA TTTAAACTTA TGGCAATATA TGAAAGGTTA 600

CTGGATGTTT TAAATTATGC AGGCAGTAGC CTTTTATTAT ATACAAATGG ATAAAGTAAG 660

GATAATACAA TGATTAATAA AAAAATACAA CAAGTTGTTT TGGAATCATT ACAGAATTTT 720

TTGAATGGGA ACTTCATTTC GCCTTGTGTA GTCTATGATT TTGGCTTGCT GGAAACTGTA 780

CTTGATGAAT TTAAAAATCA AATTCCTGTA ACATTCAATT ACCAACTTTT TTATGCCGTT 840

AAAGCAAATT CAAATGAGAA GATACTTGAA TTCTTAGTAG ATAAAATTGA TGGAGTTGAT 900

GTGGCGTCAT TATCTGAATT AGATGTGGCT AAAAAATTTT TCCCACCAAC TCAAATTTCT 960

GTTAATGGTC CCGCATTTTC TTATGAAACT TTATATAATC TGATTAAAAA ACAATATAAA 1020

GTTGATATTA ACTTTTTGGA ACATCTTCAA CAATTTTCCC CAAAAGAATC TGTTGGAATA 1080

AGAGTAACGG AGCCAGATGA ACTTAATAAT CGTATGAGTC GATTTGGAAT AAATATTTGC 1140

AGTGATAATT GGACTAGTAA TTTACAAAAT CCTTTAATTA CACGACTGCA TTTTCATTTT 1200

GGAGAAAAAG ATGATAAATT TATTGTTAAG TTAGATAAAA TATTATTTAA GTTACAAGAA 1260

ATTAATAAAC TTAGAGAGGT TAGAGAAATA AATCTTGGAG GCGGTTTTAT GAAATTATTT 1320

ATGGAAAATC GTTTGAAAGA ATTTTTTCTA TCACTTATGG AAATCTATAA AAAGTACGAT 1380

ATTGATAGTA CTGTGACTAC AATAATAGAA CCAGGTAGTG CAATTACTTC ATTTTCTGCC 1440

TATATGATTA CTAGCCCAGT TAATGTTAGT GAGGTGAATG AGCAGCAGGT TATCACGTTA 1500

GACACATCAA TATACACCAA TACATTATGG TTTGTTCCGC ATATTATTAC AACGTTAAAT 1560

TCAAGTAGTA AAGAGCGTTA TAGTACTATT CTCTATGGTA ATACCTGTTA TGAACATGAC 1620

AAGTATAAAA TGAAAGTTTC GCTTCCAAGG TTAACTCAAA ATAGCAGTAT AGTGTTTTTT 1680

CCTGTAGGAG CTTATATAAA AAGCAATCAT TCAAATTTAC ATCGTAATGA TTTTATGCGG 1740

GAGGTATATT TGTGGACAAA AAACTTGACA TATTAGATAA AGTTAAGGAA TATTTAGGAA 1800

ATAAAACTAC TCAAATTCTG GATAATCAAT ATAAAGAATT TTTGAAACTT AATGATATAA 1860

GGCGAGCGTT TGGTATTTCA GAAAAAGTAT TAAACAATTC TTTTAATTTT ACGAGTAAAG 1920

AATTTAATGA TTTAATTAAT AACGAAAATT ATTTATTCGA ATATGCATGT AGAATTAGAG 1980

AGGAATGGAG AAAAAAATGC TTTAATCATT CTTATCGTTT TCTATGCTCA CCTATAATTA 2040

CAGATGATTT TCTTAACACG AAGACATTGA GAAGTAGCCA AATTGAATAT AAATATGAGC 2100

GATATTTATC GAAAAGTTCG ATAGGCGATA GAGCGGTTGA TGGCTTTGTT TCCTTCAATA 2160

CTTTAACAGC TAATGGTATG TCTGCTATTA AACTATGTCT TGAGATATTA AACTCTATTT 2220

TCTTCAAGAA GAAGATTGAT TTATTATATT CAACCGGATA TTATGAAACA AGATTTTTAT 2280

TAAATAATCT TGCTAAATCA GGTATTAGTT GCTATGAGGT AAGTAATTGT GAATTGGATA 2340

AAGATAAATT TTATAATGTA TTCATGATGG AACCCAATCG AGCCGATTTA ACATTACAAA 2400

AAACTGATTT CAAGATAGTA GAATATTTTG TTAAGTATAA AAATAATTCA ATAAAAGTCG 2460

TTATTTTAGA TATTTCATAT CAAGGTTCTA ATTTTAAATT AGTAGAATTT TTAGAGAAAT 2520

TTAAATTTGC GAATGTAATT ATTTTTGTGG TACGATCTTT GATAAAATTA GATCAAATGG 2580

GATTAGAATT GACAAATGGG GGAATAATAG AAGTGTTTAT TCCTAATCAT TTGAGAAAGT 2640

TGAAAAATTT TATTGAAGAG GAATTCAATA AATTTAGAAA TTCTCACGGA GCTAATCTAA 2700

GCCTCTATGA ATACTGTTTG CTTGATAATT CTTTAACTTT AAAAAATGAT TGGAACTATT 2760

CTGATTTAGT TATGAAATTT ACGAGTAATT TTTATGCTGA TATAAAAGAC TTGTTCATGG 2820

AAAATTCTGA TATTGAAATC ATCCATGAAG AGGGAGTACC TTTTGTATTT TTAGATTTAA 2880

TAGGTGAAGG TAAAAAAGAA TATGAAATGT TTTTTCAATG GTTAAACTTC TTTTACAAAC 2940

AGCTTGGAAT CACATTGTAT GCTAGAAATA GTTTTGGGTT TCGGAATCTA ACAGTAGAGT 3000

ATTTTGGAAT TATTGGGACA GAAAGATATA TATTTAAGAT TTGTCCAGGT GTTTATAAAG 3060

GGTTAAGTTA TTATTTGATG AAATTTTTAT TAAAATCTTT TTCAAATGAA TATTTAAAAA 3120

CTACTGATGA GGTTAATAGA TGAAAAATTT GATAAAGTTG CTAATAATTA GATTGATTGT 3180

TAACTTAGCA GACAGTGTAT TTTATATAGT AGCATTGTGG CACGTTAGCA ATAATTATTC 3240

TTCGAGCATG TTCTTAGGAA TATTTATTGC AGTAAATTAT CTACCGGATT TGTTACTAAT 3300

CTTTTTTGGA CCAGTTATTG ACAGAGTAAA TCCGCAAAAA ATTCTTATAA TATCAATTTT 3360

GGTTCAATTA GCAGTGGCTG TAATATTTTT ATTATTATTA AACCAAATAT CATTTTGGGT 3420

GATAATGAGT CTAGTGTTTA TTTCAGTAAT GGCTAGCTCC ATAAGTTACG TGATAGAAGA 3480

TGTGTTGATT CCTCAAGTGG TAGAATATGA TAAGATTGTA TTTGCAAATT CTCTTTTTAG 3540

TATTTCGTAT AAAGTATTAG ATTCTATTTT TAATTCATTC GCATCATTTT TACAGGTGGC 3600

AGTAGGATTT ATTTTATTGG TTAAGATAGA TATAGGCATA TTTTTACTTG CTCTATTTAT 3660

ATTGTTGTTG TTAAAATTTA GAACTAGCAA TGCGAATATA GAAAACTTCT CTTTCAAATA 3720

TTACAAGAGA GAAGTGTTGC AAGGTACAAA GTTTATTTTA AATAATAAAT TATTATTTAA 3780

AACCAGTATT TCTTTAACGC TTATAAACTT TTTTTATTCA TTTCAGACAG TAGTTGTACC 3840

GATTTTTTCT ATTCGATATT TTGATGGTCC GATTTTTTAT GGTATTTTTT TAACTATTGC 3900

TGGTTTGGGT GGTATATTGG GAAATATGCT AGCGCCAATC GTAATAAAAT ATTTAAAATC 3960

GAATCAAATT GTTGGTGTAT TTCTTTTTTT GAACGGCTCA AGTTGGTTAG TAGCAATTGT 4020

TATAAAAGAC TATACTTTAT CACTTATTTT ATTTTTCGTT TGTTTTATGT CTAAAGGAGT 4080

CTTCAATATT ATTTTTAATT CGTTGTACCA ACAAATACCT CCACATCAAC TTCTTGGTAG 4140

GGTAAATACT ACCATTGATT CTATTATTTC TTTTGGAATG CCAATTGGTA GTTTAGTTGC 4200

AGGAACGCTT ATTGATTTGA ATATTGAATT AGTGTTAATT GCTATTAGCA TACCTTATTT 4260

TTTGTTTTCT TATATTTTTT ATACGGATAA TGGATTGAAA GAATTTAGTA TATATTAGAA 4320

ATGTTTATGT TCATTCAAAA GCATAATGAC TATAACTGAA AAAGAAAAGT GATATCTTTA 4380

AGGTTGTTCT TCTTGGTGGT GAGATTCGTG AGACAACCCA AGCTTTTGTC GGAAAGATTA 4440

CCAATGCTTT GATGGATAGG ATGTACTTTA GCAAGATGTT TTTAGTGGTA ACGGTATCGT 4500

GGATGGACGT GTAATAACCT CTTCTTTCGA GGAGTATTTT ACTAAAAAAC TAGCCTTGGA 4560

GCGTTCCCCA GAAACGGACT TACTCATTGA CTCTTCAAAG ATTTGGGGAG AAGATTTTGC 4620

TTCATCTGTT CCTTGAAAAA AGTCACAGCA GTCATCACAG ACGATAGTAC TGAACAAAAC 4680

TATGAAGAGT TAGAAATTTA TACGCAGGTG ATTGTATAAA GGATCTGGAA ATAGATAAGA 4740

AGTTGATTAG TATTGACCTA GGTGGTACAA ATATTAAGAT TACTGTTCTT TCAAATGACG 4800

GTGAGATTGA AACTTTGTGG AGTATTACAA CAGATACAAG TGAGAAAGGT TCTCAAATTA 4860

TATCGGACAT CATCAGTTCT ATTAAAAATA AATTGACCGA ACGGAATATT CCTGATAGCG 4920

ACCTTCTTGG AATCGGTATG GGAAGTTGCT CATCATACTT TCCTTGTAAA TCATAGGGGC 4980

TATAAACTCT CCGTCTACTT GTCCTGCAAC AATTGAAGTC TGCTCAAAAC GCCGTCCGCT 5040

AATCTTTTCA TAGACTTTCT CCCTTTTAGG AGCCTAGCTT TCTAGTTTGT TCTTTGATTT 5100

TTATTGAGTA TACCACTATT TTACTCCCTC TGGCAAGGGA CTTTGTCTAT GTGGAGGGAT 5160

TGGGCTCCTA TGTGGTGGAG CTTTTCTGTT CTTTCTGAAA TATGGTATAA TAGCACTAAT 5220

CAATTTCTAG GAAAATAGAT ACAGAAAGGG GCTGAAAGAT GTCTCATATT ATTGAATTGC 5280

CAGAGATGCT GGCAAACCAA ATCGCGGCTG GAGAGGTCAT TGAACGTCCT GCCAGTGTGG 5340

TCAAAGAGTT GGTAGAAAAT GCCATTGACG CGGGCTCTAG TCAGATTATC ATTGAGATTG 5400

AGGAAGCTGG TCTCAAGAAG GTTCAAATCA CGGATAACGG TCATGGAATT GCCCACGATG 5460

AGGTGGAGTT GGCCCTGCGT CGCCATGCGA CCAGTAAGAT AAAAAATCAA GCAGATCTCT 5520

TTCGGATTCG GACGCTTGGT TTTCGTGGTG AAGCCTTGCC TTCTATTGCG TCTGTTAGTG 5580

TCTTGACTCT GTTAACGGCG GTGGATGGTG CTAGTCATGG AACCAAGTTA GTCGCGCGTG 5640

GGGGTGAAGT TGAGGAAGTC ATCCCAGCGA CTAGTCCTGT GGGAACCAAG GTTTGTGTGG 5700

AGGATCTCTT TTTCAACACG CCTGCCCGTC TCAAGTATAT GAAGAGCCAG CAAGCGGAGT 5760

TGTCTCATAT CATTGATATT GTCAACCGTC TGGGCTTGGC CCATCCTGAG ATTTCTTTTA 5820

GCTTGATTAG TGATGGCAAG GAAATGACGC GGACAGCAGG GACTGGTCAA TTGCGCCAAG 5880

CAATCGCAGG GATTTACGGT TTGGTCAGTG CCAAGAAGAT GATTGAAATT GAGAACTCTG 5940

ACCTAGATTT CGAAATTTCA GGTTTTGTGT CCTTGCCTGA GTTGACTCGG GCTAACCGCA 6000

ATTATATCAG CCTCTTCATC AATGGCCGTT ATATTAAGAA CTTCCTGCTC AATCGTGCTA 6060

TTTTGGATGG TTTTGGAAGC AAGCTTATGG TTGGACGTTT TCCACTGGCT GTCATTCACA 6120

TCCATATCGA CCCTTATCTA GCGGATGTCA ATGTGCATCC AACTAAGCAA GAGGTGCGGA 6180

TTTCCAAGGA AAAAGAACTG ATGACTCTGG TTTCAGAAGC TATTGCAAAT AGTCTCAAGG 6240

AACAAACCTT GATTCCAGAT GCCTTGGAAA ATCTTGCCAA ATCGACCGTG CGCAATCGTG 6300

AGAAGGTGGA GCAAACTATT CTCCCACTCA AAGAAAATAC GCTCTACTAT GAGAAAACTG 6360

AGCCGTCAAG ACCTAGTCAA ACTGAAGTAG CTGATTATCA GGTAGAATTG ACTGATGAAG 6420

GGCAGGATTT GACCCTGTTT GCCAAGGAAA CCTTGGACCG ATTGACCAAG CCAGCAAAAC 6480

TGCATTTTGC AGAGAGAAAG CCTGCTAACT ACGACCAGCT AGACCATCCA GAGTTAGATC 6540

TTGCTAGCAT CGATAAGGCT TATGACAAAC TGGAGCGAGA AGAAGCATCC AGCTTCCCAG 6600

AGTTGGAGTT TTTCGGACAA ATGCACGGGA CTTATCTCTT TGCCCAAGGG CGAGATGGAC 6660

TTTACATCAT AGATCAGCAC GCTGCTCAGG AACGGGTCAA GTACGAGGAG TACCGTGAAA 6720

GCATTGGCAA TGTTGACCAA AGCCAGCAGC AACTCCTAGT GCCCTATATC TTTGAATTTC 6780

CTGCGGATGA TGCCCTGCGT CTCAAGGAAA GAATGCCTCT CTTAGAGGAA GTGGGCGTCT 6840

TTCTAGCAGA GTACGGAGAA AATCAATTTA TTCTACGTGA ACATCCTATT TGGATGGCAG 6900

AAGAAGAGAT TGAATCAGGC ATCTATGAGA TGTGCGACAT GCTCCTTTTG ACCAAGGAAG 6960

TTTCTATCAA GAAATACCGA GCAGAGCTGG CTATCATGAT GTCTTGCAAG CGATCTATCA 7020

AGGCCAATCA TCGTATTGAT GATCATTCAG CTAGACAACT CCTCTATCAG CTTTCTCAAT 7080

GTGACAATCC CTATAACTGT CCTCACGGAC GTCCTGTTTT GGTGCATTTT ACCAAGTCGG 7140

ATATGGAAAA GATGTTCCGA CGTATTCAGG AAAATCACAC CAGTCTCCGT GAGTTGGGGA 7200

AATATTAAAA GTATAAAAAA GTCTGGGAAA AATTTTCAAA ATCAAAAAAA CGCATAAAAT 7260

CAGGTGTTCA AAAACCTTGA TTTTATGCGT TTTATCATGG AAATAGTTAC TTCATTTTTT 7320

CCTAATTCTT TTCGAAACTC TTTTTAAACG ACGTCAGTTT TATCAGTAAT CTCAAAACAG 7380

TGTTTTGAGC TAATTTTGCC AGTTTTGTCT GTAACATCGA AGTTGTGTTT TACCACTCTG 7440

CGACTGGTTT CCTAGTTTGC TCTATGATTT TCACAGAGCA TTAAATTGCG ATTTTGCCAA 7500

GTTTCTTTAT TCGTCTAAAA GTAGAGTCTG TTCTATGCGT CTAATGTACG AATCAGGTTG 7560

ACCATTTCAA TAGCTCCTTG TGCACACTCA GAACCCTTAT TTCCTGCTTT AGTACCAGCT 7620

CGTTCTATGG CTTGTTCAAT TGTATCTGTC GTTAGCACAC CAAACATAAC AGGAATTTCG 7680

CTATTTAAAC TGATTTGGGC GATTCCCTTA GATACCTCGC TACATACATA ATCATAATGA 7740

CTTGTATTCC CTCTAATGAC AGCTCCCAAG CAGATAATTG CATCATATTT TTTACTTTTT 7800

GCCATTTTTG ATGCAATCAG TGGTATTTCA AAAGCTCCTG GAACCCAGGC TACCTCTATA 7860

TCTTTCTCGT TTACATTCTC TCTTTTGAGA TTATCTAGTG CTCCAGATAA TAATTTTGAA 7920

GTTATAAATT CATTAAATCT CGCTACAACA ATACCTATTT TAATATTGTT TGCTACTAAA 7980

TTACCTTCAT AAGTGTTCAT TTATTTTTCC TCCATATTTA AAATGTGACC CATTCGATTT 8040

TTCTTTGTTT CTAAATAAAA ACTATCGTAA GGATTGGCTT CTATTTCGAT TGATATTCTA 8100

CTGGAAATGG TAATTCCATA TTTTTCTAAC TGTTCAACCT TGTCAGGATT ATTTGTCAGT 8160

AAATGAAGTG ACTGAAGTCC CAGATCTTTA AGCATTTTTG CTCCAATATG ATATTCTCTT 8220

AAATCACCTT CAAAGCCTAA TGCAAGATTG GCATCAAGCG TATCCATGCC TTGATCTTGT 8280

AAATGATAGG CTTTTAATTT ATTGATAAGT CCAATTCCTC GTCCCTCCTG TCGCAAGTAA 8340

AGTAAGACAC CCGAACCATT CTCAACAATC ATTTTCATAG CCTTATCGAA TTGCTGTCCA 8400

CAATCGCAAC GTAAAGAGCC TAAAACATCT CCTGTTAAAC ATTCGGAGTG GACCCGACAT 8460

AATACATTGG CTTCATCCTC TATATTTCCC ATAATAAGAG CAAGATGATG TTCCCCATTT 8520

AGTTTATCTA TATAGCTAAT TGCTTTGAAA TTACCGTATC TAGTAGGCAT ATTGACAGTT 8580

GAAACTCGTT CTACCAGCTG ATCATATACT TTTCTATATT CTTGTAATTC TTTGATGGTA 8640

ATTAGTGGAA TGTTGTGTTT TTTCGAGAAC TGAATTAAAT CATCTGTTCT CATCATTTTG 8700

CCATCATGAT TCATTATTTC ACAACATAGG CCACACTCTT TTAGTCCAGC TAATTTTAAT 8760

AAATCAACAG TTGCTTCTGT GTGTCCATTT CTTTCTAGGA CACCACCTTT TTTTGCAATT 8820

AAAGGAAACA TGTGTCCTGG CCTGCGAAAA TCAGAGGGTG TTATATCTTC AGCTACACAC 8880

ATACGTGCGG TCAGTCCTCT TTCCTCGGCA GAAATACCTG TGGTCGTTTC TTTATAATCA 8940

ATTGAAACTG TAAAAGCAGT CTTATGATTA TCTGTATTGT TTTCAACCAT AGGTGAAAGC 9000

ATTAATTGAT TAGCTAAACT TTCGCTCATA GGCATACAAA TTAATCCTTT GGCATAAGTA 9060

GCCATAAAAT TAACATTTTC TGTTGTAGCT GCTTGTGCAG AACAAATTAA GTCTCCTTCA 9120

TTTTCTCTAT CCTTGTCGTC TATAACAAGA ACAAGTCGTC CCTTCTGCAA TGCTTCTAAT 9180

GCTTCTTGTA TTTTTCGATA TTCCATTGAC TGATTATCCT TTCTGCTAAA ATCCATTTTG 9240

ATATAATAGT TCCTTAGATA TTTCTGATTT TGGAGAGTTA TCCATCAGTT TTTGCACATA 9300

TTTACCTAAG ATATCATTTT CAAGATTTAC TGTACTCCCG ACTTGTTTAC TCTTAAGAAT 9360

GGTTTGTTCC AAGGTATGAG GGATAACAGA TACTGAAAAG TTTACTTTGG AGACTTTAGC 9420

GACAGTCAGA CTAATGCCGT CAATTGTAAT AGATCCTTTT TCAACTATTA AATCTAAAAT 9480

TTCTTTTTGT GTGTTGATTT GATACCATAC AGCATTATCA TCTTTTTTTA TTGACGAGAT 9540

TTTTCCTGTA CCATCAATGT GTCCTGTAAC GACGTGACCC CCAAGTCGAC CGTTGACAGA 9600

TAAGGCTCTT TCTAGATTCA CCTCACTTCC ATGTTTTAAT AGAGTAAGAG CTGTTCGACT 9660

CCATGTTTCA TTCATTACAT CAACTGTAAA GGATTGATGA TTGAAATGAG TAACTGTAAG 9720

ACAGATACCA TTTACTGCTA TACTATCGCC TAAATGGATA TCCGTTAATA TTTTTGAGGC 9780

TTTAATTGAT AGTTTACAAT TACGAGAGTC TTTCTGTATT CTTTCAACTT TTCCGATTTC 9840

TTCAATTATT CCTGTGAACA TGGATAAATC ACTTCACTTT CTATGAGATA GTCATTTCCT 9900

ATTTGAGAAA ATGCATAAGG TTTCAATCTA ATAGCGTCAT TTGGCAAAGA AATACCTTCA 9960

CCTCCGACAG GAAACTTGGC ACTACCTCCA AAAACTTTTG GTGCAATATA TATTTTCAGC 10020

TCATCAACAA TTTGTTGTTC CAAAGCACTC CAATTCATTA GACTGCCCCC TTCTAGAACT 10080

AGGCTATCAA TCTGCATGTT TCCTAGATGT TGCATTAAAC TCGATAAGTC TATATGATTG 10140

CCTTTTTTCT TTATGGAAAG TATTTCACAG CCATGATTTT GATATAGCTT CATTTTATTT 10200

TTGTCTTCAG AGGAAGTGGC AATGTAAGTT TTAATATCAT TTGCTGTTTT TACGATTTTA 10260

GAGGTAAGAG GAGTTCGTAA ATGTGTATCG CATATGATAC GGATAGGATT TTTCCCTTCC 10320

TCCAATCTAC ATGTCAGCAA AGGATCGTCT TGAATAACAG TATTGACTCC CACCATAATT 10380

GCACTAACAT GGTGTCGTAA CTGATGCACA TGCTTTCTTG CTTCTTCTTC AGTAATCCAT 10440

TTGGATTGAT TTGTTTTAGT GGCTATTTTT CCATCCATTG ACATTGCATA TTTCATAAAA 10500

ACATAGGGTA CATGCTGGGT AATATACTTT CTAAAACTTT TTATTAAGTT AAGACACTCA 10560

TTTTCTAAAA TTCCAACAGT AACTTGAAGA TTATTTTCCT CAAGTATCTT TACTCCTTTT 10620

CCAGATACAA TAGGATTACA GTCTAGGCTT CCAATGACTA CTCTTGTAAT ACCACTATCG 10680

ATTATAGCAT CTATACAGGG AGGTGTTTTC CCGAAGTGAC AACAGGGTTC AAGTGTTACA 10740

TAAAGCGTCG CTCCGACAGG GGATTCTCTA CAGTTTTTAA GAGCATTTCT CTCAGCATGT 10800

GGGCCACCAA AAAACTCATG ATAACCTTGT CCGATAATGT GATTATCTTT TACAATAACT 10860

GCGCCGACCA TAGGATTGGG ATTGACGTAA CCAGCCCCTT TTTGTGCCAG TTTTATTGCT 10920

AATTTCATAT ATTTTGAATC GCTCATCTCG CTACCTCCAA AAAAATATAC CTTGAATAGG 10980

GGACTACTCA AGGCATACAA AAGAAAACTT ATGCGATTAA CAAAAATGCT CTGAAATGAC 11040

AAGTAATCAT TTCAGAGCAC GCAAAAAGCA CAAATATACT TTTATCTTCT TTCATCCAGA 11100

CTATACTGTC GGCTTTGGAA TTTCACCAAA TCATGCCTTT CGGCTCGTGG GCTATACCAC 11160

CGGTAGGGAA TTTCACCCTG CCCTGAAGAT AGTTATTCAA TTACAGATGA TTATAGTACT 11220

TAATTTTGAA TATGTCAACA GATAAATACC GATTGTTTTT GATATACTGT ATTTGTGATA 11280

ATCGATTCTC GCTCCTCGGA TAAAGAAAAT ATGATATACT AGATAAACGA AATAAGAGAG 11340

AAGGAATACT ATGTACGCAT ATTTAAAAGG AATCATTACC AAAATTACTG CCAAATACAT 11400

TGTTCTTGAA ACCAATGGTA TTGGTTATAT CCTGCATGTG GCCAATCCTT ATGCCTATTC 11460

AGGTCAGGTT AATCAGGAGG CTCAGATTTA TGTGCATCAG GTTGTGCGTG AGGACGCCCA 11520

TTTGCTTTAT GGATTTCGCT CAGAGGATGA GAAAAAGCTC TTTCTTAGTC TGATTTCGGT 11580

CTCTGGGATT GGTCCTGTAT CAGCTCTTGC TATTATCGCT GCTGATGACA ATGCTGGCTT 11640

GGTTCAAGCC ATTGAAACCA AGAACATCAC CTACTTGACC AAGTTCCCTA AAATTGGCAA 11700

GAAAACAGCC CAGCAGATGG TGCTGGACTT GGAAGGCAAG GTAGTAGTTG CAGGAGATGA 11760

CCTTCCTGCC AAGGTCGCAG TGCAAGCAAG TGCTGAAAAC CAAGAATTGG AAGAAGCTAT 11820

GGAAGCCATG TTGGCTCTGG GCTACAAGGC AACAGAGCTC AAGAAAATCA AGAAATTCTT 11880

TGAAGGAACG ACAGATACAG CTGAGAACTA TATCAAGTCG GCCCTTAAAA TGTTGGTCAA 11940

ATAGGAGCAG AGAATGACAA AACGTTGTTC GTGGGTCAAG ATGACCAACC CGCTCTACAT 12000

CGCCTATCAT GATGAGGAGT GGGGCCAGCC CCTCCATGAT GACCAAGTAT TGTTTGAGTT 12060

GTTGTGTATG GAAACCTATC AGGCAGGCCT GTCTTGGGAA ACGGTACTCA ACAAACGCCA 12120

AGCTTTCCGA GAAGTCTTTC ATAGCTATCA AATTCACTCA GTCGCAGAGA TGACTGACAC 12180

TGAATTGGAA GCCATGCTGG AGAATCCAGC TATCATTCGA AATAGAGCCA AGCTTTTTGC 12240

TACACGCGCT AACGCCCAAG CCTTTCTACA GTTACAGGCA GAGTACGGCT CTTTTGATGC 12300

CTATCTTTGG TCTTTTGTTG AGGGGAAAAC TGTCGTTAAC GATGTTCCTG ATTATCGCCA 12360

AGCGCCAGCT AAAACACCCT TATCTGAGAA ATTAGCCAAA GATCTCAAAA AACGAGGCTT 12420

CAAGTTCACA GGCCCAGTCG CCGTATTGTC TTTTCTACAG GCTGCAGGGC TAGTTGATGA 12480

CCACGAGAAT GATTGTGAGT GGAAAGGTCT TAAATGATGT CTAACAAAAA TAAGGAAATT 12540

CTGATTTTTG CGATTCTCTA TACAGTCCTC TTTATGTTTG ATGGCGTTAA ATTGCTGGCT 12600

TCTTTAATGC CATCTGCCAT TGCAAATTAT CTTGTTTATG TAGTTTTAGC TCTATATGGC 12660

TCCTTCTTGT TCAAGGATAG ATTGATCCAA CAATGGAAGG AGATTAGAAA GACTAAAAGA 12720

AAATTCTTCT TTGGAGTCTT AACAGGATGG CTCTTTCTCA TTCTGATGAC TGTTGTCTTT 12780

GAATTTGTAT CAGAGATGTT GAAGCAGTTT GTGGGACTAG ATGGACAAGG TCTAAATCAG 12840

TCTAATATTC AAAGTACCTT TCAAGAACAA CCACTACTGA TAGCTGTTTT TGCTTGTGTC 12900

ATTGGACCTC TGGTAGAAGA ATTATTTTTC CGTCAGGTCT TATTGCATTA CTTGCAGGAA 12960

CGGTTGTCAG GTTTACTAAG CATTATTCTG GTAGGACTTG TTTTTGCTCT GACTCATATG 13020

CACAGTTTGG CTCTATCAGA GTGGATTGGT GCAGTTGGTT ACTTAGGTGG AGGCCTTGCC 13080

TTTTCTATTA TTTATGTGAA AGAAAAAGAG AATATCTACT ATCCCCTACT TGTTCACATG 13140

TTAAGCAACA GCCTCTCCTT AATCATTTTA GCTATCAGTA TAGTAAAATG AAATGAGAAC 13200

AGGACAAATC GATTTCTAAC AATGTTTTAG AAGTAGAGGT GTACTATTCT AGTTTCAATA 13260

TACTGTAATA TGTGATGAAA ATGCCAGTAA TGATACCGAG AAAAAAGCTG AGAAACTTTT 13320

CCCAGCTTTA TTTGTTATAG TCAAAGAGAA TGACTTGTTC CTGTGCATCT ACATGAGCAT 13380

GGACCCCAAA GGGTACAATT GCTCTTGGAG TTGCGTGGCC GACATTCAGA TTATAGACAA 13440

TCGGGATATT GCTGTCAATG ATATCCAATA GTGCCTCTTT ATAGTCGTCA TGGAAAGTTT 13500

CATCCATAGG TTTTCCGACC AAGAGTCCAT TGATGACCGC GAATATGCCA GTGTCCTTTA 13560

AAGTTAGCAA CATCTTTTTG AAGTCTTCTG GCTTAGGCTT TTCTTCGCTT GTTTCGAGCA 13620

AGAGGATTTT CCCTTCCCAG TCTGACAAGT CAGGGAAAAG TTTGTATTTT TGGCAGAGTT 13680

CCGTGCTATC TGCGTATCGA GAGTTGTCAA AGATATCGTA GAGGGATTCG AGGCAACCAC 13740

CGAGGATTTT CCCCTCGAAC TGGGCACTTC CTTGCAACAA GTCAAAACCT GTATTTGTAT 13800

GACTGACACG AGGTGTTCCC AGGGCCGTGG GACTAAAATC AGTTCGTTCC TCATACCAAA 13860

CGTCACTAGG GCGGATTTCT GAAATTCTTC CCGTCTCAAT CAATTCTTTA AAGTAGTGAA 13920

GGCTATAGGC TAGCATTTCT TTGTCTAATT CACAAATGTC TGCTAAAAAG GATTGACCAT 13980

AAAAAGTCTT GATTCCTAAT TTATGCAACA TGAGGTGGTT CATGGTTGTA TCCGAGAAGC 14040

CAAGAAAAAT TTTTTGCTTG ATAACCTTTT GGAGTTGGTC ATTTTCAAAA AGATAAGGTA 14100

GCAAGCGATA GGTATCGTCT CCACCGATGG CACATAGGAT CATGTCGATG CTATCATCAG 14160

AAAAGGCATG AATCAAATCC TCTGCACGAG CTTCAGGATG GTCCTTGATA AAGTCTAATC 14220

CTTTTAACGA ATGGGGCAAA AAGATGGGAT TGGTCCCAGA TCCTTGAGAC GTT 14273

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9828 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

GTGAAGTGCG GCAAAAGGTG CAAGTGATGA GCTCAGGTTC TTTAGCTCTT GACATTGCCC 60

TTGGCTCAGG TGGTTATCCT AAGGGACGTA TCATCGAAAT CTATGGCCCA GAGTCATCTG 120

GTAAGACAAC GGTTGCCCTT CATGCAGTTG CACAAGCGCA AAAAGAAGGT GGGATTGCTG 180

CCTTTATCGA TGCGGAACAT GCCCTTGATC CAGCTTATGC TGCGGCCCTT GGTGTCAATA 240

TTGACGAATT GCTCTTGTCT CAACCAGACT CAGGAGAGCA AGGTCTTGAG ATTGCGGGAA 300

AATTGATTGA CTCAGGTGCA GTTGATCTTG TCGTAGTCGA CTCAGTTGCT GCCCTTGTTC 360

CTCGTGCGGA AATTGATGGA GATATCGGAG ATAGCCATGT TGGTTTGCAG GCTCGTATGA 420

TGAGCCAGGC CATGCGTAAA CTTGGCGCCT CTATCAATAA AACCAAAACA ATTGCCATTT 480

TTATCAACCA ATTGCGTGAA AAAGTTGGAG TGATGTTTGG AAATCCAGAA ACAACACCGG 540

GCGGACGTGC TTTGAAATTC TATGCTTCAG TCCGCTTGGA TGTTCGTGGT AATACACAAA 600

TTAAGGGAAC TGGTGACCAA AAAGAAACCA ATGTCGGTAA AGAAACTAAG ATTAAGGTTG 660

TAAAAAATAA GGTAGCTCCA CCGTTTAAGG AAGCCGTAGT TGAAATTATG TACGGAGAAG 720

GAATTTCTAA GACTGGTGAG CTTTTGAAGA TTGCAAGCGA TTTGGATATT ATCAAAAAAG 780

CAGGGGCTTG GTATTCTTAC AAAGATGAAA AAATTGGGCA AGGTTCTGAG AATGCTAAGA 840

AATACTTGGC AGAGCACCCA GAAATCTTTG ATGAAATTGA TAAGCAAGTC CGTTCTAAAT 900

TTGGCTTGAT TGATGGAGAA GAAGTTTCAG AACAAGATAC TGAAAACAAA AAAGATGAGC 960

CAAAGAAAGA AGAAGCAGTG AATGAAGAAG TTCCGCTTGA CTTAGGCGAT GAACTTGAAA 1020

TCGAAATTGA AGAATAAGCT GTTAAAGCAG TGGAGAAATC CGCTACTTTT TCGATTTTTG 1080

ATTCAAGTTT TTAGATTATA TATAGTAGCT TGAAATAAGA TATGAACAAC TCTATTAGGA 1140

AAGTCAAATT AATTTCTAGA AATGTTTTAG CAGCTACAGC GTACTATTCC AAACTCAACC 1200

AACTATAATA GATCGAAACT AGAATAGTAC ATATCTACTT CTAAAACATT GTTAAAAATC 1260

GATTTGACTT TCCTTATTTC ATTCCGCTAT ATATAGTTTG CTGTTTCTTG TCGCTCCTCT 1320

GGAAAGCTGA TATAATAGCT TTATGAATAA AAAACGAACA GTGGACCTGA TACATGGTCC 1380

GATTCTTCCC TCGCTCTTAA GCTTCACCTT TCCAATTTTG CTATCAAATA TTTTTCAACA 1440

GCTCTATAAC ACTGCTGATG TCTTGATTGT TGGACGATTT CTTGGTCAAG AATCCTTGGC 1500

TGCAGTAGGA GCGACGACAG CGATTTTTGA CCTGATTGTA GGTTTTACAC TTGGTGTTGG 1560

CAATGGCATG GGGATTGTCA TTGCTCGTTA TTATGGGGCT CGGAATTTCA CTAAAATCAA 1620

GGAAGCAGTA GCAGCCACCT GGATTTTAGG TGCTCTTTTG AGCATTCTAG TTATGTTGCT 1680

GGGCTTTCTT GGCTTGTATC CTCTCTTGCA ATACTTAGAT ACTCCTGCAG AAATTCTTCC 1740

TCAATCTTAT CAATATATTT CTATGATTGT GACCTGTGTA GGTGTCAGCT TTGCTTATAA 1800

TCTTTTTGCA GGCTTGTTGC GGTCTATTGG TGACAGTCTA GCAGCCCTGG GATTTCTGAT 1860

TTTCTCTGCC TTGGTTAATG TGGTTCTGGA TCTCTATTTT ATTACGCAAT TGCATCTGGG 1920

AGTTCAATCC GCAGGACTTG CTACCATTAT TTCGCAAGGT TTATCAGCGG TTCTCTGCTT 1980

TTATTATATT CGTAAAAGTG TGCCAGAACT CTTGCCACAG TTTAAACATT TCAAATGGGA 2040

CAAAAGCTTG TACGCGGATC TCTTGGAGCA AGGTTTGGCT ATGGGCTTGA TGAGTTCAAT 2100

TGTATCTATC GGCAGTGTGA TTTTACAGTT TTCTGTTAAT ACATTTGGTG CAGTGATTAT 2160

TAGTGCCCAG ACGGCAGCTC GACGCATTAT GACCTTTGCC CTTCTTCCTA TGACCGCTAT 2220

TTCTGCATCA ATGACGACCT TTGCTTCTCA GAATCTAGGA GCTAAGCGAC CTGACCGTAT 2280

TGTTCAAGGT CTTCGAATCG GCAGTCGTTT AAGTATATCC TGGGCAGTTT TTGTTTGTAT 2340

TTTCCTCTTT TTTGCCAGTC CAGCTTTGGT TTCCTTCTTG GCTAGTTCGA CAGATGGTTA 2400

CTTGATAGAA AATGGAAGTC TCTATCTGCA AATCAGTTCA ACCTTTTATC CCATTTTGAG 2460

CCTCTTGTTG ATTTATCGCA ATTGCTTGCA GGGCTTGGGG CAAAAGATCC TTCCTCTAGT 2520

TTCTAGCTTT ATTGAACTAA TCGGAAAAAT CGTTTTTGTG GTTTTGATTA TTCCTTGGGC 2580

AGGATATAAG GGTGTTATCC TTTGTGAACC TCTTATCTGG GTTGCCATGA CAGTTCAACT 2640

GTACTTCTCA TTATTCCGTC ATCCCTTGAT AAAAGAAGGC AAGGCAATCT TGGCAACCAA 2700

AGTGCAATCC TAGTTGGATT TACTGAATAA AATCCATTTC CTCTAGTGAA AATCGAAAAA 2760

ACTTGTGTTC TCTTCTTTAG TTTGGTGTTG AAAATAGTTT AACAGACTTT TGACTTCTTT 2820

TATATGATAT AATAAAGTAT AGTATTTATG AAAAGGACAT ATAGAGACTG TAAAAATATA 2880

CTTTTGAAAA TCTTTTTAGT CTGGGGTGTT ATTGTAGATA GAATGCAGAC CTTGTCAGTC 2940

CTATTTACAG TGTCAAAATA GTGCGTTTTG AAGTTCTATC TACAAGCCTA ATCGTGACTA 3000

AGATTGTCTT CTTTGTAAGG TAGAAATAAA GGAGTTTCTG GTTCTGGATT GTAAAAAATG 3060

AGTTGTTTTA ATTGATAAGG AGTAGAATAT GGAAATTAAT GTGAGTAAAT TAAGAACAGA 3120

400

TTTGCCTCAA GTCGGCGTGC AACCATATAG GCAAGTACAC GCACACTCAA CTGGGAATCC 3180

GCATTCAACC GTACAGAATG AAGCGGATTA TCACTGGCGG AAAGACCCAG AATTAGGTTT 3240

TTTCTCGCAC ATTGTTGGGA ACGGTTGCAT CATGCAGGTA GGACCTGTTG ATAATGGTGC 3300

CTGGGACGTT GGGGGCGGTT GGAATGCTGA GACCTATGCA GCGGTTGAAC TGATTGAAAG 3360

CCATTCAACC AAAGAAGAGT TCATGACGGA CTACCGCCTT TATATCGAAC TCTTACGCAA 3420

TCTAGCAGAT GAAGCAGGTT TGCCGAAAAC GCTTGATACA GGGAGTTTAG CTGGAATTAA 3480

AACGCACGAG TATTGCACGA ATAACCAACC AAACAACCAC TCAGACCACG TTGACCCTTA 3540

TCCATATCTT GCTAAATGGG GCATTAGCCG TGAGCAGTTT AAGCATGATA TTGAGAACGG 3600

CTTGACGATT GAAACAGGCT GGCAGAAGAA TGACACTGGC TACTGGTACG TACATTCAGA 3660

CGGCTCTTAT CCAAAAGACA AGTTTGAGAA AATCAATGGC ACTTGGTACT ACTTTGACAG 3720

TTCAGGCTAT ATGCTTGCAG ACCGCTGGAG GAAGCACACA GACGGCAACT GGTACTGGTT 3780

CGACAACTCA GGCGAAATGG CTACAGGCTG GAAGAAAATC GCTGATAAGT GGTACTATTT 3840

CAACGAAGAA GGTGCCATGA AGACAGGCTG GGTCAAGTAC AAGGACACTT GGTACTACTT 3900

AGACGCTAAA GAAGGCGCCA TGGTATCAAA TGCCTTTATC CAGTCAGCGG ACGGAACAGG 3960

CTGGTACTAC CTCAAACCAG ACGGAACACT GGCAGACAAG CCAGAATTCA CAGTAGAGCC 4020

AGATGGCTTG ATTACAGTAA AATAATAATG GAATGTCTTT CAAATCAGAA CAGCGCATAT 4080

TATTAGGTCT TGAAAAAGCT TAATAGTATG CGTTTTCTTG TGGAGATATT TCCTTCAATT 4140

TTGCTACTAT ATTAAACAAA AATCAAAAAG CAAACTAGAA AGTTATGCTC AAATAAAATC 4200

TAAATTTGAC AATGTAAACC GAGTCGGATA GCTTTAAGTA CTGTTTTGAG GTTGAAGATA 4260

CGATTTTTGA TAGGAACTCA TCAATTTTAG ATTTTTAAGC AGCATCAATA AATTGCTTCC 4320

TTGTTTTGTC ATAATTTTTT TATTTAAAAA ATTATGACma GAGTGTGCTA TTCTTTTTAT 4380

GAGAGGTGTA TGAATATGAT AAATGTATGT GATAAATGTA TGTGATGTTG GAAAAAGAAT 4440

AAAAGAACTT AGAATATCTT CAAATCTTAC TCAAGATAAG ATTGCTGAGT ATTTGTCTTT 4500

GAATCAAAGC ATGATTGCCA AAATGGAAAA AGGTGAAAGG AATATCACGA ATGGATTTAA 4560

GTAATAAAGC TTCAAATCTT AGAAAAAAGT TGGGAGCTGA TGGTGAATCG CCGATAGATA 4620

TTTTTAAATT GGTACAAAAG ATAGAAAATT TGACGCTGGT ATTTTATGGA CTCGGAAAGA 4680

ATATTAGCGG AGTCTGTTAT AAAGGAACTC AGTTCAGTCT CATTGCAGTC AATTCAGACA 4740

TGCCATTAGG AAGGTAAAGA TTTTCTTTAG CACATGGACT GTATCATCTT TATTATGATG 4800

AGGTGAAGAA GAGTTCAGTC AGTCTTATCT TGATTGGTGA AGGAGATGAA ACTGAAAGAA 4860

AAGCGGATCA GTTTGCTTCT TATTTTTTAA TTTTCCCATC TTCACTGTAT AGGATGGTTG 4920

AGGAAATCAG AGAAAATGCC AATAGAACTC ATCTTGAAGT AGAAGATATT ATAAAATTGG 4980

GTCAGTTTTA TGGTATCAGT CATAAAGCTA TGTTATATAG ATTGAGGAAT GATGGATACC 5040

TTGATGCAGA AGAAATTAAA AATATGGATA TTAGTGTTAT AGAGACAGCT TCAAGATTAG 5100

GCTATGATAC AAGTTTATAT CGTCCTTTGT CAGAAAGTAA AAAAGAAATG GCATTAGGAT 5160

AATATATTAA TTCAACTGAA CAACTTTTAG AAAATAACAG AATTTCGCAA GGGAAGTATG 5220

AGGAACTGTT ACTAGATGCT TTCAGATATG ATATTGTATA TGGGCTAGAT GAAGAGGGGG 5280

GAGTTGTCGT TTGACTAGTC GTGTATTTAT TGATGCAGAT TGTATTTCAG TATTTTTATG 5340

GGTTGGCACT GAACATCTTT TAGAAAAGCT CTATTTGGGT AAAATTGTTA TTCCACAAGA 5400

GGTGTATGAT GAAATCAATA TACCTACAAT TCCCCATTTA AAATCTAGGA TAGATCAGTT 5460

GGTAGCTAAG GGTTCAGCTG AGATTGTGAG CATAGACATT GGAACTGAAG AATACGCATT 5520

ATATAGAGAT TTAACAAGAA ATCATGATAG TAACAAGATT ATTGGTAAGG GAGAAGGGGC 5580

ATCTATTTCC TTAGCGAAAA AGCATAATGG GATATTAGGA AGTAATAACC TAAGAGATGT 5640

TAAATCATAT GTAGAAGAAT TTTCTTTAGA ATATATGACA ACAGGAGATA TACTGATTGA 5700

AGCGTTTAAA GCGTAATTTA TTACTGAATA AGAGGGCAAT CATATCTGGA ATAATATGCT 5760

TAAAAAGAGA AGGAAAATTG GTGCAAATTC ATTTTCAGAC TATCTTCGTG GAAGTATTCA 5820

TCAAAATAGA CAAAAATAAA TTTGGATAAA TCGAACTCAC TATTCAGGAG GCATATGAGC 5880

AATTCGAAAA AGAAAAGTGT CAAATTGAGC CTATAGGAGT AGAAGTGAAA TAGTAAGTCC 5940

TGCATAGTGG ATGAGAGAAA AGTTCTCCTT GAAGTTTTCC TGAACTATCA GTCGCATGTC 6000

AAACGATATG TAGGGTAATG TGAGAGGGGA TAGCGAGTAG TTTTTGGTTA TTTTATCAAA 6060

AAACTTATAT TTTATTATAC CGAATGATAA AATATAATAA AAATGATAGA ATAAGGAAAA 6120

AACATGAATG TCAAAAAGAT AATGTCAATT TTTCAATCCT TTTATGTTGA TGTCAGTATT 6180

GAGGAACTGA CTTTGACTTT ACCAATCAGT TTTGTAAAAA GGTTTGAGTA TACTCAAATG 6240

ACTTTTCATA AGGAATCATT TTTATTGATT AAAGAAAAGA GAAGGGGGAG TTTGAGTTCA 6300

TTTGTTACTC AGGCTCGCAC TATGGGTGAA AAAGCCAATA TGGATGTTGT TTTGGTGTTT 6360

TCGAAGTTAT CAGACAGTGA AAAAAAGCAA TTACTTCAAG CTAGAGTTCC GTTTGTAGAC 6420

TTTAAGGGAA ACCTCTTCTT CCCTCCATTG GGACTAGTAC TCAATGCGAA TGATACTGAA 6480

GTCCCTAAGG AATTAACACC TAGCGAACAA TTAACGTGGA TTGCCTTTTT ATTGACAAAA 6540

GGTCAAAAAG TAGTAGATGT TGATTTGCTT TCACAAGTCA CTGGACTTCC AAACTCAACA 6600

ATTTATAGGT GTTTGAGGAC TTTTAAAGCT TTATATTGGT TAAACAAGCA AAATAAGCTT 6660

TACACATATA CGGTGTCAAA GAAAGAATTA TTCTTAAAAT CCGTGTCATG TTTATTTAAT 6720

CCCATCAAAA AACGGATTTT ATTGCCAGAT GGCGATATAA AGCAGATAAA ATCTGTTTCT 6780

AACCTTCTAT ATGGTGGTGC TTATGCTTTG TCGCATTCAA CTTTTTTAGC TGAAACGGAT 6840

GAAAATATTA GCTATGTCAT ATGGCAGAGA AAATTCAATC AGTTATCCTT GCCACTTTCT 6900

CAGCATGTTT TAAAATGAAA GATGCTAGAG ATATGGAAAT ATCGTCCTTT TGTATCTGAG 6960

TTTTGGAATG ATTTTAAAAA TAATCATGAT AAACAATTTG TAGATCCGAT TTCTCTTTAT 7020

TTGACCTTAA AAGATGATGA TGACCCACGT ATAGAGGAAG AGAGTGAAGC ACTAGAAAAT 7080

ATGATATTAC AGTATCTGGG AGAAGATGAT GCCAGCTAAT ACGAAAGTTA TTTTTCAAGA 7140

AATGTTTGCG GATTTTCAGA ACTATTATGT TCTGATTGGG GGAACTGCTA CCTCTATCGT 7200

ATTGGATTCG CAAGGATTTA AAAGTCGCAC AACAAAAGAT TATGATATGG TCATCATTGA 7260

TGAAGTAAAA AATAAGGAAT TTTATACTAC CTTGAATCAT TTTTTAGAAT TGGGAGAGTA 7320

TCAAGGAAGT CAGAAAGATG AGAAAGCGCA GCTTTTTCGA TTTACAACAA CTAATCCTGA 7380

GTTTCCTTCT ATGATTGAAC TATTTAGTAT CTTACCAGAA TATCCATTAA AGAAGGACGG 7440

TCGAGAAATT CCCTTACATT TTGACCAAGA TGCTAGTTTA TCAGCCTTAT TATTGGATGA 7500

AGATTATTAT AATATATTGG TGCATGAAAA AGAAACCATT CAGGGGTATT CGGTATTGAG 7560

TAATTGTGGT TTATACTCTT CGAAAATCTC TTCAAACCAC GTCAGCTTCC ATCTACAACC 7620

TCAAAACAGT GTTTTGAGCA GCCTGCAGCT AGCTTCCTAG TTTGCTCTTT GATTTTCATT 7680

GAGTATTAAT TATTTTTAAG GCTAAAGCTT GGCTGGATAT GAGGGAGCGC TCTGCCACAG 7740

GTGCTCAAGG TTTAAGTAAG TCCATTAAAA AGCATTTGAA TGACCTTACC CGTTTGACAG 7800

CTTCCTTGCT AGGAGATGAA AAGTTATCGG CTATAACATC AAGTAGTGCG GTAAAAGCAG 7860

ACATGCACCG CTTTGTGATA GAATTAGAGC CTGTGAAGTC AACTATTCTT CAAAATAATG 7920

ACATTTCATT GGATCAAAAT GAAATTTTTG AAATTCTGAA AAATTTTCTC GATGGTTAAA 7980

ATAATTGTAG CGAGATGGCT ATATTGAATT CGTCTATATC TGGAAACTAG AAAAAACTTC 8040

AATTTCAGGA GAAAATGAAG TCAATCTTCC CACAATCAAA CGTATAGTAT CAAGGTTTTT 8100

CAAGACCTGA TATTATGCGT TTTTTGCTTT TCAAAACTTT TTGCCCAGTC TTCGTTTTTA 8160

TCCTCTAGTC ACTTGATTTG TTTCAGGTGG TTTTTTAGTA TAGTAGAATG AAACGAGAAC 8220

AGGACAAATT GATCAGGACA GTCAAATCGA TTTCTAACAA TGTTTTAGAA GCAGAAGTGT 8280

ACTATTCTAG TTTCAATCTA CTATAGTTAA ATCTGCGGTC AAGTCTACTG GTGAATCTAT 8340

GATTGTAATA CTCTTCCAAA ATCTCATCAA CCACGTCAGT CTTGCCTTGC AGTCTGTATC 8400

TTACTGACCA AGCTAGTGAT GGATTTAGAA TAGGTGATTT GGAGCGTCCT ATTAGCTAGG 8460

AAATGCTGCT CATAGTCCTT TGCTGAGGCT AGGGTGTTTC AACATTCAAC ACTCAACTGG 8520

TTGATCTAGT TGATAGGAAG GGAGTTACTA TAAAATACTC AGGCTTCCAT CATATTTTTT 8580

GAAACGATTG TGTAATCAAA ATGTACCAAT ATTGTAGTAT TGGTACAGAA GATGTTGTGA 8640

ATGGATAAAT ATATCATAAC TGCTATCTCA AAAAGATTTC ATATGTCTGT GCATATATAA 8700

TAGACTTCCT GCAAAACTAG AATCCTAGTT CATGATTGAT AATACCAGCA ATCAAATTCA 8760

TTCGTAATCC AAAGCGTTTA CGATGATTTC GATAGGTTGT TGAAAACATT TTAAACGTTT 8820

CTACTTTGGC AAAGATGTTC TCAACCTTGC TTCTCTCCTT AGATAGCGCA TGGTTATAGG 8880

CTTTATCTTC AGCTGTTAGC GGCTTGAGTT TGCTGGATTT ACGTGGAGTT TGTGCTTGAG 8940

GACATATCTT CATGAGCCCT TGATAACCAC TGTCAGCCAA GATTTTACCA GCTTGTCCGA 9000

TATTTCTGCA ACTCATTTTG AACAACTTCA TATCATGACA ATAGTTCACA GTGATATCCA 9060

AAGAAACAAT TCTCCCTTGA CTTGTGACAA TCGCTTGAGC CTTCATAGCG TGAAATTTCT 9120

TTTTACCAGA ATCATTCGCT AATTCTTTTT TTAGGGCGAT TGATTTTTAC TTCCGTCGCA 9180

TCAATCATTA CCGTGTCCTC AGAACTAAGA GGAGTTCTTG AAATCGTAAC ACCACTTTGA 9240

ACAAGAGTTA CTTCAACCCA TTGGCTCCGA CGGATTAAGT TGCTTTCGTG AATACCAAAA 9300

TCAGCCGCAA TTTCTTCATA AGTGCGGTAT TCTAGGCTTA ATTTAGGTTT TCGTCCACCT 9360

TTTGCGTGTT TAAGTTGATA AGCTGTTTTT AATACAGCTA ACATCTCTTT AAAAGTCGTG 9420

CGCTGAACAC CAACAAGACG CTTAAATCGT GTATCAGTTA ATTGTTTACT TGCTTCATAA 9480

TTTCGCAGGG AGTCTATTGA CTCTTTGGTA GGTGTCAATG TTTTTTTCAT CTATCCCGAG 9540

AATTATTTTC CCGCCATTTG TATTTGCAAA TGCTGAGTAG GTTTCCCAGA AAGACTCTGG 9600

AAGATTGTTT TTAGCTTTTT TGTATTCTAA ATCAACCCCT TCAAATTTTA AGTCCATATT 9660

TTTCCTTTAC ATCTGTTTTT TGTGGTTCTG GTATTTGTTC AAGTTGAGTG ATAATATAGC 9720

GAATTGAATT TCGAGAGTTT TTACTCAGTT AATTTCTTTT TTAACCCACT TTAATTGCTT 9780

TTTTAACACG GGTTAAAAAA GAAATTAAAG TGGGTTAATT TTTCTTGA 9828

(2) INFORMATION FOR SEQ ID NO: 42:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3369 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

CCGCGAAAGA TATTTTTGAA CAAGAGTTTG GACGTGAGGT CCGTGGCTAT AATAAAGTAG 60

AAGTTGACGA GTTTTTAGAC GATGTCATCA AGGACTATGA AACCTATGCT GCCTTGGTCA 120

AGTCACTTCG TCAGGAAATT GCGGATTTGA AGGAAGAATT AACTCGTAAA CCGAAACCTT 180

CACCAGTTCA AGCAGAACCC CTTGAAGCGG CAATTACAAG TTCTATGACG AATTTTGATA 240

TTTTGAAACG CCTGAATAGA TTGGAAAAAG AAGTTTTTGG TAAACAAATT TTAGATAACT 300

CAGATTTTTA AGTAGTTATT TGAGATGTGC AATTTTTGGA TAATCGCGTG AGGAGAATTG 360

TTTCTCATGA GGAAAGTCCA TGCTAGCACA GGCTGTGATG CCTGTAGTGT TTGTGCTAGG 420

CGAAACCATA AGCCTAGGGA CGAGAAATCG TTACGGCAGT TGAAATGGCT AAGTCCTTGG 480

ATAGGCCAGA GTAGGCTTGA AAGTGCCACA GTGACGGAGT CTTTCTGGAA ACAGAGAGAG 540

TGGAACGCGG TAAACCCCTC AAGCTAGCAA CCCAAATTTT GGTCGGGGCA TGGAGTACGC 600

GGAAACGAAC GTAGTATTCT GACTGCTATC AGCTAGAGCT GTTAGTGGTA GACAGATGAT 660

TATCGAAGGA AGTGGTCCTA GTCACTTCTG GAACAAAACA TGGCTTATAG AAAATTGCAT 720

ATAGGTTGGG GCTGAGAAAT TTTCTCAACC TCATTTTTTA AAGTGGACAT ATAGAAAGGT 780

CTTGCAAGAC TGTAACATGA AAAAAGAATT TAATTTAATT GCAACTGTGG CAGCAGGGCT 840

TGAGGCTGTC GTTGGTCGTG AAGTGCGAGA GTTGGGCTAC GATTGTCAGG TTGAAAATGG 900

ACGTGTTCGT TTTCAAGGAG ACGTGAGAGC TATTATCGAA ACCAACCTTT GGCTTCGGGC 960

AGCAGATCGT ATCAAAATTA TCGTAGGAAC GTTCCCAGCT AAGACTTTTG AAGAGCTATT 1020

TCAGGGAGTT TTCGCTTTGG ATTGGGAAAA TTATTTACCA CTTGGAGCTC GGTTCCCGAT 1080

TTCAAAAGCT AAATGTGTTA AGTCCAAACT TCACAATGAG CCCAGTGTTC AGGCTATTTC 1140

TAAGAAAGCT GTTGTCAAGA AATTGCAGAA ACACTATGCT CGCCCAGAAG GGGTTCCTCT 1200

GATGGAGAAT GGCCCAGAGT TTAAGATTGA GGTCTCTATT CTCAAAGATG TGGCAACTGT 1260

CATGATTGAT ACGACCGGGT CTAGCCTCTT TAAACGTGGT TATCGTACCG AAAAAGGTGG 1320

CGCTCCTATC AAGGAAAATA TGGCAGCAGC CATTTTACAA CTTTCTAACT GGTATCCAGA 1380

CAAGCCTTTG ATTGATCCGA CCTGTGGTTC GGGGACTTTC TGTATTGAGG CAGTTATGAT 1440

TGCTAGAAAG ATGGCGCCAG GTCTTCGTCG CTCTTTTGCA TTTGAGGAAT GGAACTGGAT 1500

CAGCGATCGC TTGATTCAAG AAGTGCGCAC AGAAGCGGCT AAAAAAGTAG ACCGTGAGCT 1560

TGAGCTGGAT ATCATGGGCT GTGATATTGA TGCTCGCATG GTGGAAATTG CTAAGGCCAA 1620

TGCTCAGGTA GCTGGTGTTG CAGGAGACAT TACTTTTAAG CAGATGCGCG TGCAGGATTT 1680

ACGTTCCGAT AAAATCAATG GAGTAATCAT TTCCAATCCG CCTTATGGTG AACGTTTGTC 1740

AGATGATGCA GGGGTGACCA AGCTCTATGC TGAGATGGGG CAAGTATTTG CACCGCTGAA 1800

AACTTGGAGC AAATTTATCC TGACTAGTGA TGAAGCTTTT GAAAGCAAGT ATGGTAGCCA 1860

AGCAGATAAG AAGCGTAAGT TATACAACGG AACCTTGAAA GTGGATCTAT ATCAATATTT 1920

TGGTCAGCGT GTCAAACGGC AAGAGGTAAA ATAGAAAGGG ATACTCATGA GTAAAAAAAG 1980

ACGAAATCGT CATAAAAAAG AAGGTCAAGA ACCGCAATTT GATTTTGATG AAGCAAAAGA 2040

GCTAACAGTT GGTCAAGCTA TTCGTAAAAA TGAAGAAGTG GAATCAGGAG TCTTGCCTGA 2100

GGATTCCATT TTGGACAAGT ATGTTAAGCA ACACAGAGAT GAAATTGAGG CGGATAAGTT 2160

TGCGACTCGT CAATACAAAA AAGAGGAGTT CGTTGAAACT CAGAGTCTGG ATGATTTAAT 2220

TCAAGAGATG CGTGAGGCTG TAGAGAAGTC AGAAGCTTCT TCGGAGGAAG TTCCATCTTC 2280

TGAAGACATC TTACTACCCT TGCCTCTGGA CGATGAGGAG CAAGGCTTGG ATCCTCTATT 2340

GCTAGATGAT GAAAATCCAA CAGAAATGAC TGAAGAAGTG GAAGAGGAGC AAAACCTTTC 2400

TCGTCTGGAT CAAGAGGACT CAGAAAAGAA AAGTAAAAAA GGCTTTATTT TGACCGTTTT 2460

GGCGCTTGTA TCAGTAATTA TTTGTGTCAG TGCTTATTAT GTCTACCGTC AAGTGGCTCG 2520

TTCGACTAAG GAAATTGAAA CTTCTCAATC AACTACAGCC AATCAATCGG ATGTGGATGA 2580

TTTTAATACA CTTTATGACG CCTTTTACAC AGATAGCAAT AAAACGGCTT TGAAAAATAG 2640

CCAGTTTGAT AAACTGAGTC AACTCAAGAC TTTACTTGAT AAGCTGGAAG GTAGTCGTGA 2700

ACATACGCTT GCCAAATCTA AATATGATAG TCTAGCAACG CAAATCAAGG CTATTCAAGA 2760

TGTCAATGCT CAATTTGAGA AACCAGCTAT TGTGGATGGT GTGTTGGATA CCAATGCCAA 2820

AGCCAAATCG GATGCTAAAT TTACGGATAT TAAAACTGGA AATACGGAGC TTGATAAAGT 2880

GCTAGATAAG GCTATCAGTC TTGGTAAGAG CCAGCAAACA AGTACTTCTA GCTCAAGTTC 2940

AAGTCAAACT AGCAGCTCAA GTTCAAGTCA AGCAAGTTCA AATACGACTA GTGAGCCAAA 3000

ACCAAGTAGT TCAAATGAGA CTAGAAGTAG TCGCAGTGAA GTCAATATGG GTCTCTCGAG 3060

TGCAGGGGTT GCTGTTCAAA GAAGTGCCAG TCGTGTTGCC TATAATCAGT CTGCTATTGA 3120

TGATAGTAAT AACTCTGCCT GGGATTTTGC GGATGGTGTC TTGGAACAAA TTCTAGCGAC 3180

TTCACGTTCA CGTGGCTATA TCACTGGAGA CCAATATATC CTTGAACGTG TCAATATCGT 3240

TAACGGCAAT GGTTATTACA ACCTCTACAA GCCAGATGGA ACCTATCTCT TTACCCTTAA 3300

CTGTAAGACA GGCTACTTTG TCGGAAATGG CGCTGGTCAT GCGGATGACT TAGATTACTA 3360

AGCAGTCGG 3369

(2) INFORMATION FOR SEQ ID NO: 43:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9713 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

AAGTTTACAA TTTAAATGAA TTAACAATTT TCCCAACTAA AAGCACTCCA GTTACCGCAA 60

CGTTTGTACT GAATGTACTA AATCGCATTC CATCAACTTC ATCTGTTTCG TCAACTTGAA 120

CAGATACTAA TTGAAGATTT AATACTTCTG CTGCCATAGC TAGCTCCTCC TATTTAAATT 180

TTTGGGATTA AGTACTTTAT CCACCCTCAT ATACTCTCTC CACCAGTAAA ATGCAAGCAA 240

TGATACAAAA TAGATTTAAC TATTTTATAT AGCGAAAACT TACAAATTTT TAAGAAATAA 300

TTTTTGCATT CTTAAAGATA AAATAGGAAC TTTTAGTAAT AAATATTAAA ATAAATAAAA 360

TAATAGATAC TATAAAATTT GGAAGTATTA ACCCCAAAAG ATTCATATCA TCTATTAAAA 420

TATCCTCTAA AGAGTAGTAT ATTAAAGCCA TAATTTTAAT GTTAAGTAAA AATGCAATTA 480

ATGAAGTAAC AAATGTCAAA AATATAGCCT CACCAACTTT AATCTTAACC ATCTGGTAAT 540

TAGAAGTTCC TAAAATTTCA AATTGCTGAA TCTCAATCCT TTCTTGATGC GATGACAAAA 600

ATGCAATTGA AATAATATTT GCAAGTACTA TCAAAATTGG TGCTCCTACA TAGACAATAA 660

ATGCTACTTT TAGCTCTAAA TCACTGTCAT CTTGAAATTG AGATAGTATA TTCTGAGAAA 720

TCATTTGAAA ACTAGAAATT AGTAATATAG CTCCTGTAAT TGCAGCACTG ATAGATTTTA 780

TATAAGACTT ACAATATAGT AAATTCCACT TCGAAACAAT GAACATAAAA TTATTTCTAA 840

ATATAATTAT AGAAAGTAGT TTGATAAAAC ATGACTGTAT AAAAGGAGAT AATTGATAAA 900

TAATCACAAT ATCTAAGATT ACAATATTGA ATATTATCTG GGCCTTCGCT AAAATTGTGC 960

TATCTTGGAA AATTTGTTGC AAAGAAAGCA ACCAGATAAC ACTAAAACCA GCCAATAGCA 1020

GTATTCTTTT TACTATTGAA AGAACATGCC TTATTTTAGA ACTCTTCCTA TTTCTAATCT 1080

TCTTGAACGT ATAAAAGCAA CCACTTAGAA AGGCTAAAAA TGAAATCAAC ACTACTGTAA 1140

TGATACATCC AACAGCACTC GTTTGAAATT GGATATCAGG TAATATATTT TCCCCGAAAA 1200

AGTATTGTAA AAAATAATAA TAATTTGACG TAACAAATAT AGAGCATAGA TATGCAATAA 1260

AACTAATAAT CGAGGAAATG ATAAAAATCT GTCCCCCCAC AAGAAATGAT AGTTGAAGGC 1320

GACTTGCTCC CAACACCTCC AGAAGTTCGT AATCATCTCT AAAAATTTCA ACCAACATAT 1380

TTATTATGTT AGAGAGCACA AAGAATAATG TTACTCCTCC GAATACTATC GGAAACATAA 1440

AAATTGGTTT AGGATCTGGA AGTCCGACAA ATACTTGCGA ATTATTCTCA ACATTAATTA 1500

CCCCATTAAC AGCCAATCCC ATAACTAAAC TCGAAACAAA AATTACTGGT GAAACGCCTA 1560

ACCATTGTTT CTTATTATGT AAAAATTGAT AGTAAACTAA TCTGAGCATC TCTATTCCTC 1620

CGTAGTTGAT TGTACCTCTA AGATTTTATA CAACTCTTCC CCGCTAGGTC TATGAAGTTC 1680

TTTGAAAATT TTTCCATCTT TCAATATTAA TGCACGATCA GTTTTCGAGG CCAATTCTAT 1740

ATCGTGCGTT ACCATAATTA CACACTTACC CGCCCCTACT AACTCTCTCA ATAATTCAAA 1800

AATTACTTCA CGAGAAACGC TGTCTAAAGC CCCAGTTGGC TCATCAGCAA ATATTATATC 1860

ACTATCAGCA ATAACCGCTC TAGCTATAGC AACCTTCTGT TGTTCTCCAC CAGACAGAGT 1920

TCCAACAAAA TCGTTTAAGC CAGCATTAAA CTTCATTCTT TTGAGTAAGT TTTCTACATT 1980

TTTAATAGTT AATTTTTTTT GTGATAATCG CAAAGGAAGT GCTATATTTT CTATTACCGG 2040

CAGGGAAGGT ATTAAATTGT ATGCTTGAAA TATAAAAGAT ACTTCGTTAC GTCTTATACT 2100

TGACAATTTT GCATTTCTGA TTTTATAGGG GTTGATTCCA TTTAAAATTA CTTCCCCACT 2160

TGTTGGTTCA AGCAAACTAG AAATACATTT TAATAAAGTT GACTTTCCAG AACCACTAAT 2220

TCCTAGAATA CTTATAAATT CTCCTCTCGA AGCAGAAAGA GAAACATTTT TCAGCACTTG 2280

CAACGTTTTA TTATTTCCTA GTAAAAATTG ATGATACAGC CCTTTCACTT TTAATATATA 2340

ATCTTTATCC ATATTCTTGC CTCCAATCAC TTAATTTTGA AAAGTGTTCC ATTTTCCAAT 2400

TTATATATAT CAGTGTATCT CTTGTCATTT AAGTCATAAT GATGTGAAAC TTCAATAAAT 2460

GAAATACCTA AATTGAACAG AATATCATGT ATGGAATTTG AATTATCATT ATCTAAATTA 2520

GCTGATATTT CGTCAAATAA GTACACTTTA TTATTTCTAA TCAGAGCTCT AGCTAAAGCT 2580

ATTTTTTGTT TTTGACCTCC AGACAAATTA CTACCATTTT CACCACATTG ATAATTTAGT 2640

ATATCTATCT TTTCTAATTC TTCATATAGA TTTACCTTTT TTAACACCTC AATTATCTGA 2700

TCATCTGAAA AATATTCATT TTGAAATAAA GTTACGTTCT CACGAATAGT AGTGTCAAAA 2760

ATATATGGTG TCTGATCAAC TGTTGGTATT GAATCTGAAC TCTTTTTCCC ATGTGATAAC 2820

AAATTTACAT AACCTTTTTG TGGCTTTAAA GAACCATTAA TTAAATTTAA AATCGTTGTT 2880

TTCCCACTAC CAGAAGTTCC TGTTAATAAT ACCCTAAATG GTGACTTAAA TGAGAAGTCA 2940

ATACTTAATT TATTTTCTGG TGTAATAGAA TATACAACAT CTTTCATGTG TATCTCATCT 3000

ATTGATGAAG TATACAGTCC GTTATTATCA TGTTCAGCGT CTATAAAATT CTTCTCTCCA 3060

CTTAAGTATT TTAAAAACGG TTTCCTTAAA TCTTTGGTTG TATTTATCTT ATTTAATGAA 3120

TAGGCAATTG ATTGTATCGG CCCTAAAACT TTATCGTTTG CTAAGAAAAT ACCTATCAGT 3180

TCACTAAAAG AAAGGCTTTT ATGATAAATT ACAAAATAAC ATCCTACAAC CAAGGGAACT 3240

AGAAAGCAAA AACCTGAAAT TAGTACTGCA ACCAATTTTG AAAGAACCTC TGATCGTTTC 3300

AAATTAAAAG TAGAATCTTC TAGTTTATCC AACTTTTTAT CCGACAAACT AATTATTTCT 3360

TTAGTAACAG AATAAGATTT TAATGTCTTA AAACCATTAA AAATTTCTTT TATTATGTGA 3420

GTATACTCTG CATTGCTGTT AGAGTACTCA TTAGCTGAAT TAGACAACAT CTTCTTCATA 3480

AAGACAGGTA CTATAATCGG CAATGCTGAT AATACAATAA ATATTATTGA nACTAGGAAG 3540

TTTAAATAAA GCATAAAACT TAGAGAGACG ATGAACAACA ATATTGAAGA AATTATTTCA 3600

AAAATTTGTC TAAAATAGTT TTCTTCGATT AATCTCAAAT CATTTGACAA AACTGAAATA 3660

ATAGATGAGT AATCTTTAAC CATTTCAGAA GAAAGATACT GTTCTCTAAA ATATCCTTGT 3720

TTAATTTTTA CATTTATATC TTTAGTTATT GATGCTTCCG TTACTTCTAA ATAGTAATTT 3780

GATATATAGA TTGCTGACCA ACCCAGAATA CTTATAGCAC CAAATCTTAG AACGTCAGAA 3840

AATGAGGAAG TCTGATTTAA ACTACCTGCA TATACAATAA TTCCTGAGAG CAAGACACCA 3900

TTAAACGAAG ATAGAAATAT TAAAATCCCC ATTAATATAA GTTTAGTCTT TTTTATAAAT 3960

TTTAAATAAT TCATAAGTTA TTCCTTCCCA CTTCTTCAAA GAAATAATTT AAAGTATCAA 4020

TCATTAAGAG AACATCTGAT GGAGTAAAAC CTCCATGACC AGCTGCTTTG TTTAAATACA 4080

ACAAACTTTT AACTCCAATA GAATTTAATT TCTTTGACCA CTCTATCACT TCGTTATTAT 4140

TAATATATGG GTCTTTCTCA CCCAAAATAT TAACTATAAC AGTATTTGAG TCTCGTGCCT 4200

TTTCAATATT TTGCATAGGC GAATATGACT TTATATAAGC CTTTACTTCA GGGTCTCTAA 4260

TATCTCCCCA CTCTGCTATT TCGGTCTTAG AAAGAGGATC ATTTGGATTC TGAAGTGTAT 4320

CATAAGGATT TATAAATGGC GAAAATAAGA GAATGCTTTG CAATAAATTT TTTTCCTCGT 4380

TCAACACCGC ACCAGCAATT ATTCCACCTG CACTAGAAGT TATTAAACCT AATCGCTTAC 4440

TGTCAATTAC ATCATTTTCC CTTAAATAAT TTACTCCCTC AATAAAATCT CTGATAGAAT 4500

TCCATTTGTT TAACGCCTTT CCTGAGCGAT ACCATTCACC ACCCAAATAG CCTCCACCTC 4560

TTACATGAAC TATAGCATAA ATAAAACCTG CATCTATTAT AGATAACATA ATTTCATCTA 4620

AATCAGAATT ATCATTCTTA CCATAAGCCC CATAGACACT TAGAATACAT TTTTTTCTTC 4680

TTGGGAGCTC ATCCGTATCT TCACTTTTCC AAAATAAAGA AATCGGTATG CTTACATCAT 4740

AACTGTCTTT TTTAGTCCAA ATCACCTTAG AAAAATATTT AGTATTATTC GATTTTATGA 4800

TGGGTCTTTC AAATTCAGTT TTTAATGTAT TTTCTATTAA ATCAAAACTA AGTATTTTTT 4860

CGTAAAAAGT TCTCCTCTCT AAAAACAGAA GAACACGATC AGAAAATGAA TTTTCATAAA 4920

GTGTTGTCTT TTCATCAAAT GTTATCTTAT TAACACTCAA CTCCCTCAAA CTATTATTTT 4980

TAAATGTAGC AAGATAAAAG ACGGAATTCG CTGCGTTTGA ACAGTCTAAA AGGATATAAC 5040

GTCCTATACA GTGAACTCTT CTAGCCCTAT CTTGATATGG TATAGTAATA GAAACTCTGT 5100

CTCCCGAAGA AGTTTCCCTT AGAATTAGTT GATCTTTCTT TTCTTCAGTT GAAGAGAGCC 5160

CAAGAAAGTA CTGTGCTTTT TCTGTACTAA ATAGAGCGAT ATCTCTAGGT GTTGGGGCTA 5220

CCGTTTCTGT GTAAGAGTGT CTAACAAAAC CCGTCCGGTC GAAACTGTAT AGAAAAATCC 5280

TGCCTTTCTG AAAGTCTACT GACTTTACAA AACAATTATT GCTATCAATG TGGACTATTT 5340

TTAATCGAAA AGAGCATTCG TTTTCTTCAA ACAGTTCCTC TTCTGTAAAG CTATCAAAAG 5400

ATTTATAGAA TAACTTACTT GGCCTCCCGT ACTCTTTGGA GCGAGTATAC ATAACACCGA 5460

ATTTACCCAA ATAGAACGAA CTTTCTACTG AAATATCTTC AATGATAAAT AACTCTTCCA 5520

TAGTATATTT TTTTATTCCA ATTAAATTAG TCGTACGCAG TGAGGATACA ACCAAAACTA 5580

TATAACTCTC ATCAGATGAA ATCCTAACAT CCTGTAAGAT ACTATCATCT GGCAAAGTAT 5640

ATTTTTCCAC ATCAAAGACA ATTTTAAGTG AATTTGAATT GTCTAAACTG GAAGAACTAA 5700

CCTTAGGAAT CCAGTCATTA TCTTCGACAT ACCATTCCTT TATTACACCA GTATTGGGTA 5760

TACTCCAATT ATCAAATTGG TACCAATATC GCCCTCTCCT AAATATCAAA GAATTCCATT 5820

TTTTTAATTC CTGAAATGAT GAAGAGATAG ACCTCTTATA GTGTGTTTTT TCCTGTATTG 5880

TATTTAAAAA TATTTCATTA CTCTGATTCA CAAGTATGAC CCCTTAATAA TGGTATCTAA 5940

ATATTATATT TGAGGAAGAA TCGTCAATTT ATTATCCATT ATTGATACCA ATCCAATTGC 6000

AACACCCGCA AATCCCGAAG CAATATCTGT TGTTATCTTT AAACCATTAT CTCCCGCAAT 6060

AACAAATCCT TCTTCAATTA CACACAAATA TCTATAAAGT TGTTCAATTA ATTTCTTTTG 6120

TCCTGAAAAG TTATCATCGA TATCACTATA TATATTATTA GCAACTTCAA GACCACAAAA 6180

TCCGTTAAAT AAACCTGGTA ATACACAAAA AACTACATCA GTTGCCCTCT CTAAAGAAGT 6240

TAAATATTTT AAGTATTTGC TTGACAAGAT TTCTTTATTT CTATTAATAA GTAAAAGCAG 6300

GCCAGCACTT CCAGTTGCTA GATATGGTAG TAATCTATGA CCTTGGCTGT ACTGCAATGA 6360

ATTATTACTA TCTACTTTAT AAGCAACTAA TTCTTTATCT ACAGCCAATT CTAGACCATT 6420

TTTATAGATA CTTTCACCAG TTAATTTATA AGCTTCACCG AAGAGCCAAG CTACCCCTGC 6480

GTGACCATAT AGTAATCCAC CAAAATTCTC ATAAGGATCG TTACTCTGAA CATCACTAGC 6540

GCCAACTTTA CAAAAAGTTT CTGGATTTTC TATATAATTT AAAGTATATT CTCTAAGCCT 6600

AATTAGTATT TCTTCTCCTA GTTTATTATC AATTCCCCCT TTACTAAGAA AATACAGTCC 6660

AACCAGTAAA ATTCCAGCCT GCCCACTATA TAAATTTTTA TTTTGTGAAT TCTCAAATAT 6720

CTCTATAAAA TGAGTTGTAA AAAGTTCAAC TGCCCGATCT ATCTCCCCAA ATTCATAAAT 6780

GAGCCAGATT GTACCAATTT TACCATCAAA AAGACCAGAA AGGGACGATT TCTTAAAATT 6840

ATTTACTGCC TCATTAATAA CCTGTGTTCG AATCTCATAA TAGTCATCAA ACTTGAAATT 6900

TTTTACTTTC TTAGCTAGTT GTTGATAACT CCAAAGGATA GCTAAATCTG AAAACGCAAT 6960

TCCTTGATTA AAATTCAGAC CATAATAATG AACTGGGAAG AATCTTGATT GAAATTCTTT 7020

ACGCCACTGT CCATAAGTTA GCGTAAACCC TCTCAATAAT TTTATAATAA AATCTTGTAT 7080

ATCTTGCTCA CTCTCGATAG TTCTAATCTC ATGCATGGGT TTTAAAACTT TTTTCCTGGA 7140

AATATTCTCA ATCTGTGGAC ATTTAGAATC TAGATATGAC AATAAACTTT CTACATAATC 7200

TATATGTTCT CTTGTATAAC CCAAAGACTC AAATAGTTTT TTTCCTTCTA TCCTGGTTTG 7260

ACTTACATAG TTGTATGTCA AATCCGATGT AGTTACTAGT GGCATGTATA AATAATGAGC 7320

TATTTGTCTA ATACCATACC AATCTATCTC ACTGGGAAGT GTTTCTCGCC ATGCTCTAAA 7380

ACCAGGGGCT GCAACTTTAT GTACAACTTT TTCATCATTT GAAAAGACAG CCTGTTCCCA 7440

GTCTATTATA CTAATCTCAT CTTCATCCTT AACCAAGATA TTTCCTAAAT GTAAATCTTG 7500

ATGATATACA TTTTCAGAAT GAAACTTATT CGTTAAATCG ATGAGTTTTT CTACTATCTT 7560

TGAAACTCTC AATAGATAAT CTTTGGTCTT ATCAACAACT TCATATAAAG GAAAATTATT 7620

GGTAACCCAT CTATTTAGTG GAACGCCCTT CATATGTTCA ATTCCTAAGA AGGTGTGCTC 7680

CCAGATCTTA CCGTGCCAGT ATATTTTAGG CGTCTCACTC CATTCATTTA GAATTTTTAG 7740

TGCTTTGCAC TCCGAAGCTA ATTTCTCTGA AGAATAAGTA CCATCAAATC CTAGACCTGT 7800

ATACGGTCTA GCCTCTTTTA AAATTATTTT TTTCCCATCT TCTTTTAGCC TAGCATTATA 7860

TATCCCACCA CTGTTTGAAA ATCTAATTGC ATTATCTATA ATAAAGGGAA AGTCTCCCTG 7920

TTTTTTATCT TTCTTGTCAA GCCATTTATT CAAAAAGTCA GGGGGCACTA TACCTTTTGG 7980

AATTTTAAAT ACTGGTAAAC GTTCATCTTT AACAACTTCA TCGCCAACAA TTAATTCATC 8040

AATAGCAACC TTCTTTTCAT CATCCCTTGA CGGCCTAAAC ACACCATACC TCAGATATAT 8100

TGGTGCTTCA TCCCAACGTT TATCGCTTAA AATATATGGC CCATTATATT GCTTTAAGGC 8160

ACTTTCTAAC CTTTGCAAAA CCGACTCTAA TTCATTTTGA TTTGGATAAC ATGTAATAAA 8220

TTTACCAGAA AATCCTCGAC TAACCAATTT CCCGTTTCGC ATGATAAATT TGTCTTCTGT 8280

ACTAAGATGT TTAAATGGAA TTCGCATTTC ATGGCAAATT TTTGCTACAT CTTGTAACAA 8340

TTCATGTGAA CTGTTATACT CTGAACTAAT GTGTATTTTC CACCCTTGTC TTTCAACAAA 8400

TTTTCCAATA GGGTATTGAT AAACCCACTC ATCATTATTC ATTACTTCGT GCCAATTAAA 8460

AGGCAGACTT ACTTGGTACT TTATGCTAGT ATCTGTACTA TAATCATTAT TAGTGAAAAA 8520

GAAAGGATGC TCCAAATTGA AATTATAATC CATAACAAAA TCTCCAAGAA ATTTTATCAA 8580

ACTTAATATA TCTATAGCTA GACAGACTTA TTTAAATAAA AAGGGAGAAT CCTTTGGATT 8640

CTCCCCATAT AAGCACTAAC ATTCCAACGT GCACATATTG GAACGACATC CATAACTCCA 8700

GAGAATCTCT AAAGTTTACA ATTTAAATGA ATTAACAATT TTCCCAACTA AAAGCACTCC 8760

AGTTACCGCA ACGATTTGTA CTGAATGTAC TAAATCGCAT TCCATCAACT TCATCTGTTT 8820

CGTCAACTTG AACAGATACT AATTGAAGAT TTAATACTTC TTCTGCCATA GCTAGCTCCT 8880

CCTATTTAAA TTTTTGGGAT TAAGTACTTT ATCCACCCTC ATTATACTCT CTCCACCAGT 8940

AAAATGCAAG CAATTATACA ATGTTGTCAC ATAGAAAATA ATGTTTCCGT AACTTTTCAA 9000

AGTAACTTCC ATCTCTCTCC CAAAACTGGA AGTTAGTTTT AGAAGTTACC TAAAAATCAG 9060

GTCACCTATT TTAAAAAAGC AGCAAACTAT AAACTAGTAG GTTCCACACC AAATGTAGTC 9120

CCATACTGCC CCATAAGTCA GATTTATAGC GCACCATACC TAAAAACATC CCAAGTGAAA 9180

CATACAAACA CCAAGCTAGA ATGGTTCCTG TATGATGTGC TAAGGCAAAT AAAACACTTG 9240

TCAAAGCAAC TCTGATATCT AATTTTCTGA CCAAATTCCA TAAAATTTCT CGATACAGAA 9300

ATTCTTCAAC CATACTCGCA TTGATTAAGA ACAATAAAAA TGAAAACCAA GGAATTTGAT 9360

GTTGAAGGCC AATTAAGTTT GCTTGATTCG TGCTTCCTTG AGCATGAATC AGACTAAAAC 9420

ATAGACTTAT AATCAGTAGG CTAACAAATT CAACACCAAG CCATTTCATC CTAGATTTCA 9480

TATTGACCTT ATGCGCTTGT TTGCGTTGGC CATACATCCA TAAAAAAGAA ATGAGTGACG 9540

AACCATAGAG AATCTGTAGT ATAGTTmACT CACCGATACA AAGAAATTTC AATAAGTATA 9600

GAGrTACCAA TAsGACATTT ACTTGTTGGA ATATATAAAC TGGAATTATT CTTTTCATAG 9660

TTACCTCCGA AATAAATCTT CATAATCTAA ATCTAATACC TGCACAATCC TTT 9713

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8657 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

AAAGAAATTG TCAGAGAGTG GCTAGATGAA GTAGCAGAGC GGGCTAAGGA CTATCCAGAG 60

TGGGTGGATG TTTTCGAGCG TTGCTACACC GATACCTTGG ACAATACGGT TGAAATCTTA 120

GAAGATGGTT CAACTTTTGT CTTGACTGGG GATATTCCTG CCATGTGGCT TCGAGATTCG 180

ACAGCCCAAC TCAGACCCTA CCTTCATGTA GCTAAAAGAG ATGCCCTCCT GCGTCAGACC 240

ATTGCAGGTT TGGTCAAACG TCAGATGACC TTGGTACTCA AGGATCCCTA TGCTAACTCC 300

TTCAACATTG AGGAGAACTG GAAAGGGCAC CACGAGACTG ACCACACAGA CCTTAACGGC 360

TGGATCTGGG AGCGCAAGTA TGAGGTGGAT TCGCTTTGCT ATCCTTTGCA GTTGGCTTAT 420

CTCCTCTGGA AAGAGACTGG CGAGACTAGT CAGTTTGATG AGATTTTTGT CGCAGCGACT 480

AAGGAAATTC TCCATCTGTG GACGGTGGAA CAAGACCACA AGAACTCTCC TTATCGTTTT 540

GTCCGAGATA CGGACCGTAA GGAAGACACC TTGGTAAATG ATGGCTTTGG ACCTGACTTT 600

GCAGTGACAG GTATGACTTG GTCAGCTTTT CGTCCGAGTG ATGACTGTTG CCAGTATAGT 660

TACTTGATTC CGTCAAATAT GTTTGCTGTA GTAGTCTTGG GTTATGTGCA AGAAATCTTC 720

GCAGCATTAA ACCTAGCTGA TAGCCAGAGT GTTATTGCTG ATGCCAAGCG TCTTCAGGAT 780

GAAATCCAAG AAGGAATCAA AAACTACGCT TACACCACCA ACAGCAAGGG CGAAAAGATT 840

TACGCTTTTG AAGTGGATGG CCTAGGAAAT GCCAGCATCA TGGATGATCC AAATGTACCA 900

AGTCTACTAG CTGCGCCCTA TCTGGGCTAC TGTTCGGTCG ATGATGAAGT GTATCAAGCT 960

ACTCGTCGTA CCATTTTGAG CTCTGAAAAT CCATACTTCT ACCAAGGAGA ATACGCAAGC 1020

GGTCTCGGCA GTTCTCATAC CTTCTATCGC TATATCTGGC CAATCGCCCT TTCTATCCAA 1080

GGCTTGACAA CAAGAGATAA GGCAGAGAAA AAATTCTTGC TGGATCAGCT GGTTGCCTGC 1140

GATGGTGGTA CAGGTGTCAT GCACGAAAGC TTTCATGTAG ATGATCCGAC CCTCTACTCT 1200

CGTGAATGGT TCTCCTGGGC TAACATGATG TTCTGTGAGT TGGTCTTGGA TTACTTGGAT 1260

ATTCGCTAAG GGGCTCGCTT TAGCTCAACC GATTCTTATC AGAATCACAA GTTTACATTT 1320

AAAACGTTAA AATTTAAATT TAGAATGAGG TTTTACTTCA TGGAAAATGT TGTTGTACAT 1380

ATTATCTCAC ATAGTCACTG GGATCGTGAG TGGTACTTGC CTTTTGAAAG CCATCGTATG 1440

CAGTTGGTGG AATTGTTTGA CAATCTCTTT GATCTCTTTG AAAATGACCC TGAGTTCAAG 1500

AGTTTCCACT TGGATGGACA AACTATTGTC CTTGATGACT ACTTACAAAT TCGCCCTGAA 1560

AATCGCGACA AGGTCCAACG CTACATTGAC GAGGGCAAAC TTAAAATTGG TCCCTTTTAC 1620

ATCTTGCAGG ATGACTACTT GATCTCCAGT GAAGCCAATG TCCGCAATAC CTTGATTGGT 1680

CAACAAGAAG CTGCCAAATG GGGTAAATCA ACCCAGATTG GCTACTTTCC AGATACCTTT 1740

GGAAATATGG GACAAGCGCC TCAAATTCTT CAAAAATCAG GCATTCACGT GGCGGCCTTT 1800

GGTCGTGGTG TGAAGCCGAT TGGATTTGAC AACCAAGTCC TTGAAGATGA GCAGTTTACG 1860

TCTCAGTTTT CAGAAATGTA CTGGCAGGGT GTGGATGGTA GTCGTGTTTT AGGTATTCTC 1920

TTTGCCAACT GGTACAGTAA CGGGAATGAA ATTCCAGTTG ACAAAGATGA GGCCTTGACC 1980

TTCTGGAAAC AAAAATTGTC AGATGTGCGT GCCTACGCTT CGACCAACCA ATGGTTGATG 2040

ATGAACGGCT GTGACCACCA GCCTGTACAG AAAAATCTGA GCGAAGCCAT TCGTGTGGCA 2100

AATGAACTCT TCCCGGATGT AATCTTTGTT CATAGTTCTT TTGATGAATA TGTTCAAGCT 2160

GTAGAAGGTG CGCTTCCTGA ACACTTATCA ACTGTTACAG GCGAGTTGAC CAGTCAGGAA 2220

ACAGATGGCT GGTACACACT TGCCAACACT TCTTCATCCC GCATTTACCT AAAACAAGCC 2280

TTCCAAGAAA ATAGCAACCT CCTAGAGCAA GTGGTAGAAC CCTTGACTAT TATCACTGGT 2340

GGACACAACC ACAAGGACCA GTTGACCTAT GCTTGGAAAA CACTTTTGCA GAATGCGCCA 2400

CATGATAGTA TCTGTGGCTG TAGCGTGGAC GAAGTTCACC GCGAGATGGA AACGCGTTTT 2460

GCCAAGGTCA ACCAAGTAGG AAACTTTGTT AAAAGTAACT TGCTCAACGA GTGGAAGGGT 2520

AAAATTGCTA CGGATAAGGC TCAAAGTGAC TATCTCTTTA CTGTCATTAA CACAGGCTTG 2580

CATGATAAGG TCGATACTGT CAGCACAGTG ATTGATGTGG CGACTTGTGA TTTCAAGGAA 2640

TTGCACCCAA CAGAAGGCTA CAAAAAGATG GCTGCTCTTA TCTTGCCAAG TTACCGTGTG 2700

GAGGACTTGG ATGGTCGTCC TGTAGAGGCT ACAATCGAAG ACCTCGGAGC TAATTTTGAG 2760

TATAATTTAC CAAAAGACAA GTTCCGCCAA GCTCGTATTG CTCGTCAAGT GCGCGTGACC 2820

ATTCCAGTTC ACCTAGCGCC GCTTTCTTGG ACAACCTTCC AATTGCTGGA AGGAAAACAA 2880

GAACACCGTG AGGGTATTTA CCAAAACGGA GTGATTGATA CACCATTCGT AACGGTGAGT 2940

GTGGATGACA ACATCACAGT CTATGACAAG ACAACTCACG AAGCCTATGA AGACTTTATC 3000

CGCTTTGAAG ACCGTGGGGA CATCGGAAAC GAGTATATCT ATTTCCAACC AAAAGGAACA 3060

GAGCCAATCT TTGCAGAGCT TAAGGGCCAC GAGGTCTTGG AAAACACAGC TTGCTATGCT 3120

AAAATCTTGC TCAAACATGA ATTGACCGTG CCTGTCAGTG CGGATGAAAA GCTAGAAGAA 3180

GAGCAACAAG GTATCATCGA GTTTATGAAG CGTGAGGCTG GACGGTCAGA AGAATTGACA 3240

AACATTCCTC TGGAAACTGA GTTGACTGTC TTCGTTGACA ATCCACAAAT CCGCTTCAAG 3300

ACTCGCTTTA CTAACACTGC CAAGGATCAC CGTATCCGTC TCTTGGTCAA GACTCATAAC 3360

ACGCGTCCAA GCAATGATTC TGAAAGTATC TATGAGGTGG TGACACGACC AAACAAACCA 3420

GCTGCTTCAT GGGAAAACCC TGAAAATCCT CAACACCAAC AAGCTTTTGT CAGTCTGTAT 3480

GACGATGAAA AAGGGGTGAC TGTATCCAAC AAGGGATTGA ATGAATACGA AATCCTTGGG 3540

GATAACACCA TTGCCGTGAC CATTTTGCGT GCATCAGGTG AGCTAGGTGA CTGGGGCTAC 3600

TTCCCAACGC CAGAAGCACA ATGCTTGCGG GAGTTTGAAG TCGAGTTTGC ACTTGAATGC 3660

CACCAAGCCC AAGAACGCTT CTCAGCCTAT CGTCGTGCCA AAGCCTTGCA GACACCGTTT 3720

ACCAGCCTTC AGCTTGCTAG ACAGGAAGGA AGCGTGGTTG CGACTGGTAG CCTCTTGAGC 3780

CATTCTGTTC TCAGCATACC GCAAGTTTGT CCAACAGCCT TTAAGGTAGC TGAAAATGAA 3840

GAAGGCTATG TGCTTCGTTA CTACAATATG TGTAGTGAAA ATGTACGTGT GCCAGAAAGT 3900

CAACATCTCT TCCTTGACCT ACTTGAACGA CCATACCCAG TTCATTCAGG ACTATTGGCT 3960

CCACAAGAGA TTCGTACAGA ATTCATCAAA AAAGAAGAAA TTTAATTTCA AAAAGTAAAC 4020

ATCAAAAGAA AGGAGGGGCG AAAAAGTAAG AACTAACTGC TGATTCGCCC CTTTTATGGT 4080

AAAAACAATG ACCATTGCAA CGATTGATAT CGGAGGGACT GGGATTAAGT TTGCCAGTCT 4140

GACTCCTGAT GGGAAAATAC TGGATAAGAC AAGTATTTCA ACGCCTGAAA ACTTGGAGGA 4200

TTTACTAGCG TGGCTAGATC AACGCTTGTC AGAACAGGAT TACAGTGGGA TTGCTATGAG 4260

CGTTCCAGGT GCAGTCAATC AAGAGACAGG TGTGATTGAT GGCTTCAGTG CGGTGCCCTA 4320

CATCCATGGC TTTTCTTGGT ATGAGGCGCT TAGCTCTTAT CAGCTACCTG TCCATTTAGA 4380

AAATGATGCC AACTGCGTTG GACTCAGTGA ACTACTAGCT CATCCAGAGC TTGAAAATGC 4440

AGCCTGTGTC GTGATTGGGA CAGGGATTGG CGGAGCCATG ATTATCAATG GTAGACTTCA 4500

TCGAGGTCGC CACGGTCTGG GTGGAGAATT TGGCTACATG ACAACCCTTG CCCCTGCTGA 4560

AAAACTTAAT AACTGGTCGC AACTAGCATC AACTGGGAAT ATGGTACGAT ACGTGATTGA 4620

AAAATCTGGT CATACTGATT GGGACGGTCG CAAGATTTAC CAAGAGGCCG CAGCTGGTAA 4680

TATCCTTTGT CAAGAAGCCA TTGAGCGCAT GAACCGCAAT CTGGCGCAAG GCTTGCTCAA 4740

TATCCAGTAT CTGATCGATC CAGGTGTCAT CAGTCTGGGT GGCTCTATCA GTCAAAATCC 4800

AGATTTTATC CAAGGTGTCA AGAAGGCTGT TGAAGACTTT GTCGATGCCT ACGAAGAATA 4860

CACGGTCGCA CCAGTTATCC AGGCCTGCAC CTATCACGCA GATGCCAATC TCTACGGTGC 4920

TCTTGTCAAC TGGCTACAGG AGGAAAAGCA ATGGTAAGAT TTACAGGACT TAGTCTCAAA 4980

CAAACGCAAG CTATTGAGGT TTTAAAAGGT CACATTTCTC TACCAGATGT GGAAGTGGCT 5040

GTCACTCAGT CTGACCAAGC ATCTATCTCT ATCGAGGGTG AGGAAGGTCA CTATCAATTG 5100

ACCTACCGCA AACCTCACCA ACTTTATCGT GCCTTGTCCT TGTTGGTAAC AGTTCTAGCA 5160

GAAGCTGATA AAGTAGAGAT TGAGGAACAA GCAGCTTACG AAGATTTGGC TTACATGGTT 5220

GACTGTTCTC GAAATGCGGT GCTGAATGTG GCTTCTGCCA AGCAGATGAT TGAGATATTG 5280

GCTCTCATGG GCTACTCAAC CTTTGAGCTT TACATGGAAG ACACTTACCA GATTGAAGGG 5340

CAGCCTTACT TTGGCTATTT CCGTGGAGCT TATTCAGCAG AGGAGTTGCA GGAAATCGAA 5400

GCCTATGCCC AACAGTTTGA CGTGACCTTT GTACCATGCA TCCAGACCTT GGCCCACTTG 5460

TCGGCCTTTG TCAAATGGGG TGTCAAGGAA GTGCAGGAGC TCCGTGATGT AGAGGACATT 5520

CTTCTCATTG GCGAAGAAAA GGTTTATGAC TTGATTGATG GCATGTTTGC CACGTTGTCT 5580

AAACTGAAGA CTCGCAAGGT CAATATCGGG ATGGACGAAG CCCACTTGGT TGGTTTGGGA 5640

CGCTACCTGA TTCTGAACGG TGTTGTGGAT CGTAGTCTCC TCATGTGCCA ACACTTGGAG 5700

CGCGTGCTGG ATATTGCTGA CAAATATGGT TTCCACTGCC AGATGTGGAG TGATATGTTC 5760

TTCAAACTCA TGTCAGCGGA TGGCCAGTAC GACCGTGATG TGGAAATTCC AGAGGAAACT 5820

CGTGTCTACC TAGACCGTCT CAAAGACCGT GTGACTCTGG TTTACTGGGA TTATTATCAG 5880

GATAGCGAGG AAAAATACAA CCGTAATTTC CGCAATCATC ACAAGATTAG CCATGACCTT 5940

GCATTTGCAG GGGGAGCTTG GAAGTGGATT GGCTTTACAC CTCACAACCA TTTTAGCCGT 6000

CTAGTGGCTA TCGAGGCTAA TAAAGCCTGC CGTGCCAATC AGATTAAAGA AGTCATCGTA 6060

ACGGGTTGGG GAGACAATGG TGGTGAAACT GCCCAGTTCT CTATCCTACC AAGCTTGCAA 6120

ATCTGGGCAG AACTCAGCTA TCGCAATGAC CTAGATGGTT TGTCTGCGCA CTTCAAGACC 6180

AATACTGGTC TAACGGTTGA GGATTTTATG CAGATTGACC TTGCCAACCT CTTACCAGAC 6240

CTACCAGGCA ATCTCAGCGG TATCAATCCC AACCGCTATG TTTTTTATCA GGATATTCTT 6300

TGTCCGATTC TTGATCAACA CATGACACCT GAACAGGACA AACCGCACTT CGCTCAGGCT 6360

GCTGAGACGC TTGCTAACAT TAAAGAAAAA GCTGGAAACT ATGCCTATCT CTTTGAAACT 6420

CAGGCCCAGT TGAATGCTAT TTTAAGTAGC AAAGTAGATG TGGGACGACG CATTCGTCAG 6480

GCCTACCAAG CGGATGATAA AGAAAGTTTA CAACAAATCG CCAGACAAGA ATTACCAGAA 6540

CTTAGAAGCC AAATTGAAGA CTTCCATGCC CTCTTTAGCC ACCAATGGCT GAAAGAAAAC 6600

AAGGTCTTTG GTTTGGATAC AGTTGACATC CGTATGGGCG GACTCTTGCA ACGCATCAAA 6660

CGAGCAGAAA GCCGTATCGA GGTTTATCTG GCTGGTCAGC TTGACCGCAT CGACGAGCTG 6720

GAAGTTGAAA TCCTACCATT TACTGACTTC TACGCAGACA AGGATTTCGC AGCAACTACA 6780

GCCAACCAGT GGCATACCAT TGCGACAGCG TCGACGATTT ATACGACTTA ATATTCTTCG 6840

AAAATCTCTT CAAACCACGT CAGCTTCCAT CTGCAACCTC AAAACAGTGT TTTGAGCAAC 6900

CTGCAGCTAG CTTCCTAGTT TGCTCTTTGA TTTTCATTGA GTATAAAAAC AAGAACACCT 6960

TGCTTGGCGC AGGGTGTTTC GCGTGAAACA GAAGAATTAT CTGGTTTCAA ATGCTACAGT 7020

TAGACAAACT TATGATAAAA TAGCAGAAAG TGAATGTTTC CTAAGAGCAA TTGGAGGTAT 7080

TATGCTACAC TTAAAATTAG TAAAACAAGA AATAGAAGCT GAAAAGCCAG CATCTGTAGA 7140

AGCTTGGATC ATTTCCGTCA AATTTAAAAA AGGTTGCTAC CGACATATAT AGATTCCAAA 7200

AACAAAAACG TTAGCGGAAC TAGCAGATGT GATTTTATGG AGTTTTGATT TTGCAAATGA 7260

TCATGCTCAC GCATTTTTCA TGGATAATGT TGAGTGGAGT CATGCAGATT CTTACTTTCG 7320

TAGCTTTGTT AGTGACGATG TTGAAGAACG TTACACAGAA AATGTCTATC TGGATAGCCT 7380

AAGTGTCAAA CAAAAATTTA AGTTTATTTT CGACTTCGGT GATGAATGGC GTTTTGAATG 7440

CCAAGTGCTG AGAGAAATCG AGACAGAGGA CGAAGAAGCT TATCTCGTAC GTTCGGTTGG 7500

AACGTCGCCA GAACAATATC CAGATTATGA TGGTTTTGAC TATGAAGAAT GGTAAAATTG 7560

AAATCAGTCT GTGTAGGCTT AGTATTTCAA TAGACTTCCT GCAAAACTAG AATCCTAGTT 7620

CATGATTGAT AATACCAGCA ATCAAATTCA TTCGTAATCC GAAGCGTTTA CGATGATTTC 7680

GATAGGTTGT TGAAAACATT TTAAACGTTT TTACTTTGGC AAAGATGTTC TCAACCTTGC 7740

TTCTCTCCTT AGATAGCGCA TGGTTATAGG CTTTATCTTC AGCTGTTAGT GGCTTGAGTT 7800

TGCTGGATTT ACGTGAAGTT TGTGCTTGAG GACATATCTT CATGAGCCCT TGATAACCAC 7860

TGTCAGCCAA GATTTTACCA GCTTGTCCGA TATTTCTGCA ACTCATTTTG AACAACTTCA 7920

TATCATGACA ATAGTTCACA GTGATATCCA AAGAAACAAT TCTCCCTTGA CTTGTGACAA 7980

TCGCTTGAGC CTTCATAGCG TGAAATTTCT TTTTACCAGA ATCATTCGCT AATTCTTTTT 8040

TTAGGGCGAT TGATTTTTAC TTCCGTCGCA TCAATCATTA CCGTGTCCTC AGAACTAAGA 8100

GGAGTTCTTG AAATCGTAAC ACCACTTTGA ACAAGAGTTA CTTCAACCCA TTGGCTCCGA 8160

CGGATTAAGT TGCTTTCGTG AATACCAAAA TCAGCCGCAA TTTCTTCATA AGTGCGGTAT 8220

TCTAGGCTTA ATTTAGGTTT TCGTCCACCT TTTGCGTGTT TAAGTTGATA AGCTGTTTTT 8280

AATACAGCTA ACATCTCTTT AAAAGTCGTG CGCTGAACAC CAACAAGACG CTTAAATCGT 8340

GTATCAGTTA ATTGTTTACT TGCTTCATAA TTTCGCAGGG AGTCTATTGA CTCTTTGGTA 8400

GGTGTCAATG TTTTTTTCAT CTATCCCGAG AATTATTTTC CCGCCATTTG TATTTGCAAA 8460

TGCTGAGTAG GTTTCCCAGA AAGACTCTGG AAGATTGTTT TTAGCTTTTT TGTATTCTAA 8520

ATCAACCCCT TCAAATTTTA AGTCCATATT TTTCCTTTAC ATCTGTTTTT TGTGGTTCTG 8580

GTATTTGTTC AAGTTGAGTG ATAATATAGC GAATTGAATT TCGAGAGTTT TTACTCAGTT 8640

AATTTCTTTT TTAACCC 8657

(2) INFORMATION FOR SEQ ID NO: 45:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11384 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

TCTATTTTGG GTATAGACTT ACCTATAAAG AAAAATATCT ATACACTGCC TTACTAGCTA 60

TACTGAACGA GTCAACAAAA ACGATATATA TTGATGATAT AAATACAGCA AGATTTTTTA 120

ACTTCTTTGG CAATGATATT CCTAATTCGT CTTTAAAAAA AATTGACTAT ATCGCACCTT 180

CAGAAATTGT TTCATTTAGT ACGTACGTTC GACAACGTTC TAAAGTAATT CCTAAAATTT 240

TGGAACATAT ATTAAAATCA AGTTTTTTAT TAGAGAATAT AGATGTTTCT GGTTACACTG 300

TAAATATTTT AGAAGATCAA TTAACAAAAC ATAGAACAAT CAAAATTAGT AAAAACTAAC 360

TGGTTGATCT CATGTATAAA TACCTAACAA AACCACGCGC CTTGCCTGCT GATGGAAAGA 420

AAGGTACAAA TACATGAATA TCAAAGAAAA AATCAAAAAG AATGGCCAAA GAGTTTATTA 480

TGCTAGTGTT TATCTAGGCG TTGACCAACT AACGGGCAAA AAAGCCCGTA CAACTGTTAC 540

AGCAACCACT AAAAAGGGCG TTAAAGTAAA AGCGCGTGAT GCGATCAATA CTTTTGCTGC 600

TAATGGCTAT ACAGTTAAAG ACAAGCCGAC AATTACAACA TATAATGAGC TTGTAAAAGT 660

TTGGTGGGAT AGTTACAAGA ATACAGTTAA GCCAAATACT CGCCAATCCA TGGAGGGATT 720

GGTTAGAGTG CATTTATTGC CTGTATTTGG CGATTACAAG CTATCTAAAC TTACTACGCC 780

TATTCTTCAA CAGCAAGTAA ACAAATGGGC TGACAAGGCA AATAAAGGCG AAAAAGGGGC 840

ATTTGCTAAC TACTCTTTGC TCCATAACAT GAATAAGCGT ATTTTGAAAT ATGGCGTAGC 900

TATCCAGGTA ATACAATACA ACCCAGCTAA TGATGTCATC GTTCCACGCA AACAGCAAAA 960

AGAAAAGGCT GCTGTCAAAT ACTTAGACAA CAAAGAATTA AAACAGTTTC TTGATTATTT 1020

AGATGCTCTG GATCAATCAA ATTATGAGAA CTTATTTGAT GTTGTTCTGT ATAAGACTTT 1080

ATTGGCCACT GGTTGCCGTA TTAGTGAGGC TCTGGCTCTT GAATGGTCTG ATATTGACCT 1140

AGAAAGCGGT GTTATCAGCA TCAATAAGAC ACTAAACCGC TATCAGGAAA TAAACTCACC 1200

TAAATCAAGC GCTGGTTATC GTGATATACC AATAGACAAA GCCACATTAC TTTTACTGAA 1260

ACAATACAAA AACCGTCAAC AAATTCAGTC TTGGAAATTA GGCCGATCTG AAACAGTTGT 1320

ATTCTCTGTA TTTACGGAGA AATATGCTTA TGCTTGTAAC TTACGCAAAC GCCTAAATAA 1380

GCATTTTGAT GCTGCTGGAG TAACTAACGT ATCATTTCAT GGTTTCCGCC ATACACATAC 1440

TACTATGATG CTCTATGCTC AGGTTAGCCC GAAAGATGTT CAGTATAGAT TAGGCCACTC 1500

TAATTTAATG ATCACTGAAA ATACTTACTG GCATACTAAC CAAGAGAATG CAAAAAAAGC 1560

CGTCTCAAAT TATGAAACAG CTATCAACAA TTTATAAAAA ATAAGGGTGA CCCATTTCCG 1620

GGCTACCCTC TTACTATACC AAAAATTAGT AGGGGTAGTA AAAAGGGTAT TAAATTATAA 1680

AAAGCACTAA GGGAAAGCGC CCCAAAGTGC TTATTTCAAA GGCTTTATAG CCTATAATCA 1740

CATAAAGAGA TTATTTTTTA AGGTTGTAGA ATGATTTCAA TCCACGATAT TCAGCTACTT 1800

CACCAAGTTG GTCTTCGATA CGAAGCAATT GGTTGTATTT AGCGATGCGG TCTGTACGTG 1860

AAAGTGAACC AGTCTTGATT TGTCCTGCGT TAGTTGCAAC TGCAATATCA GCGATTGTTG 1920

AATCTTCAGT TTCACCTGAA CGGTGTGATA CAACAGCAGT GTAACCAGCT TCTTTAGCCA 1980

TTTCGATAGC TTCAAAAGTT TCAGTAAGAG TACCGATTTG GTTAACTTTG ATAAGGATTG 2040

AGTTAGCAGC ACCTTCTTGG ATACCACGTG CAAGGTAGTC AGTGTTTGTT ACGAAGAAGT 2100

CGTCACCAAC AAGTTGTACT TTCTTACCAA GACGTTCAGT AAGAGCTTTC CAACCATCCC 2160

AGTCGTTTTC ATCCATACCA TCTTCAATAG TGATGATTGG GTATTTGTTA ACCAATTCTT 2220

CAAGGTAGTC GATTTGTTCT GCAGATGTAC GAACAGCAGC ACCTTCACCT TCAAATTTAG 2280

TGTAGTCGTA AACTTTACGT TCTTTATCGT AGAATTCTGA TGAAGCACAG TCAAATCCGA 2340

TAAATACGTC TTTACCTGGT ACATATCCAG CAGCTTCAAT CGCAGCAAGG ATAGTTTCAA 2400

CACCATCTTC AGTTCCTTCG AAACGAGGAG CGAATCCACC TTCGTCACCT ACGGCAGTTT 2460

CCAAACCACG TGATTTAAGG ATTTTCTTAA GAGCGTGGAA GATTTCAGCA CCGTAACGAA 2520

GGGCTTCTTT AAATGTTGGC GCACCAACTG GCAAGATCAT GAACTCTTGG AAAGCGATTG 2580

GAGCGTCAGA GTGAGAACCA CCGTTGATGA TGTTCATCAT TGGAGTTGGA AGAACTTTAG 2640

TGTTGAATCC ACCAAGATAG CTGTAAAGTG GGATTTCAAG GTAGTCAGCA GCAGCACGAG 2700

CTACAGCGAT AGACACACCG AGGATTGCAT TCGCACCCAA TTTACCTTTG TTAGGAGTAC 2760

CGTCAAGTGC GATCATAGCA CGGTCAATAG CTTGTTGATC ACGTACATCG TAGCCAATGA 2820

TAGCTTCAGC AATGATGTTG TTTACGTTGT CAACAGCTTT TTGTGTACCA AGACCACCGT 2880

AACGAGATTT GTCACCGTCG CGAAGTTCAA CTGCTTCGTG TTCACCAGTA GAAGCTCCTG 2940

ATGGAACCAT ACCACGTCCG AAAGCACCTG ATTCAGTGTA AACTTCTACT TCAAGTGTTG 3000

GGTTACCGCG TGAGTCTAGG ACTTCGCGAG CGTAAACATC AGTAATAATT GACATTTTTT 3060

ACTCTCCTTA TGAGTTAAAT TTTTTACACC TCTATAATAC CTTAAAACCC CTCCTTTTTC 3120

AAGAAAAAAC GTTATCTTTG TGCAACTTTT CCTTAACTTT ATAAAGTAAT CGCTTTCTTT 3180

TGTCTGTTTT ATTCTAACTT TTATGATATA CTGTTTTCAT GACAGATTTA TCAAAACAAT 3240

TACTTGAAAA AGCTCATGGT GGGTTAAAAA TAAATCCGGA TGAGCAAAGA CGCTATCTTG 3300

GTACTTTTGA GGAAAGAGTT CTTGGATATG TAGATATTGA CACAGCAAAT AGCCCTCAGT 3360

TAGAAAAAGG CTTTTTATTT ATTTTAGAAA ACCTTCAGGA AAAAGCAGAG CCACTATTTG 3420

TGAAGATTTC ACCAACTATC GAATTTGATA AGCAAGTTTT CTACTTAAAA GAAGCAAAAG 3480

AAACTGATAG TCAAGCCACC ATAGTATCTG AAGAGCATAT TACTTCTCCT TTTGGCCTGG 3540

TTATTCATAG CAATGCACCA GTTCAAGTAG AAGAAAAAGA CCTTCGACTT GCTTTTCCAA 3600

AACTTTGGGA AGTTAAAAAG GAAGAACCAG CCAAAACATC CTTATGGAAG AAATGGTTTA 3660

GCTAAATCTT GCACATATTT AATAAGTGCC CAATATTGGC AGCCGTGCGC TCCAGATAGA 3720

AACTGGCATT TTTCAAACTA TCTTCTAAAG GTTCACTTTT CTCCAAAATA GAAAAGACAG 3780

CTTGGATATT TTCAAATGGT AGGGGAGGTA AATCTTCAGC AAGACTACCG CAAATAGCAA 3840

TAACAGGAAC TCCAACAGGG GTTCTTTTTG CAACACCTAT AGGCGCTTTC CCAGCAAAGC 3900

TTTGACTATC AAGTCTTCCT TCTCCAACAA CAACCAAGTC AGCATCTGAA ACTTTCTTAT 3960

CAAAGTTGAT TAAGTCCAAG CAGGTATCAA TTCCAGACAC GATACTTGCC TGAGCAAAGG 4020

CACACAAACC ACCAGCAAGG CCTCCACCTG CTCCTGCTCC TTTAATTTCT AATGTTGCAG 4080

GTGAGAATTT TTCATAAAAA TCTTGGATCG CCTGATCTAC GACTGCAAAC ATAGTCGGAT 4140

GTAGACCTTT TTGATTGCCA AAAGTGTAAG TCGCACCTTG ATGACCACAT AAGGGACTCA 4200

CGACATCTGC TAAAATATGA ATTTGAACAC CTTCAGGAAT TTTATAGCAA TTTTCTGTTG 4260

AAACAGAAGC TAAGTTTAAT AAGGATTGAC CGGAAGCAGG CAAGACATTT CCATCCCTAT 4320

CATAAAATTG ATAACCTAAA CCAGCAGCAA TCCCCAGTCC TCCATCATTA CTGGCCGTGC 4380

CACCAACACC GATATAAATA TCTTTAATCC CTTTAGAGAT GAGATGAAGA ATCAACTCTC 4440

CAATACCACA AGTTTGGATT TGAAGTGGAT TTCGTTTCTC TAGCGGAATT TTTCCAAGAC 4500

CAACCAAGTC AGCTACTTCA AATAGTGCCA GTTCCCCTTT TTGAAAATAG CGCATGGCTT 4560

CTTTTTGTCC AAAAGGGTCT GTCACTTGGA TCCATTTTTC TTTTAGGTCA AGAGAATGTC 4620

GGATAGCATC TACAGTACCT TCTCCCCCAT CACCAACAGG GCAGAGGAGA CATTCTACAT 4680

CTGCTATCGA TTGTTGGAAG CCTCTTTTTA TTGCTTCAGC TACCTGTTGA GCTGTCAAGC 4740

TTTCCTTAAA CGAATCCGGT GCAATTACAA TCTTCATATT TTCCCTCATT CTAAACAGTC 4800

AATCAAAGGG AGAACTTCTA AAAAATCCCT CTTGTCAACA TGATGTGGTA TTTCTTTTTT 4860

GAGCACTTCT TTGGCACAAA AGGCGATTCC TAACTTCGCC GACTTCAACA TTAATAGATT 4920

ATTAACCCCA TCACCGATTG CCACCGTTCT TTCTTTAGAA AGTTTTAGTT TCTTTCTCCA 4980

TTTTTCCAGA GTCTCTTTTT TGACCTGGGG ACTTATAATT TGTCCAACTA ATTTTCCTGT 5040

TAAAAGACCT TCTTTGACTT CAAGCTAGTT GGCAGTGAAA TAGGCAATAC CAAGGGATTT 5100

TGCTAATCTC TCCAACTATT GGTGTAAATC CACCAGACAC CAGACCAACT AGGATGCCAT 5160

TCTTTTGGAG AATAGAGATG AACTCTGGGA CATTTAGCGA TAGATGAATT GAGTTGAAGA 5220

CGTTATCAAA GACCAAAATA GGAAGACCTT CCAACAAGGA CACTCTTTTT CTTAAACTGC 5280

TTTCAAAGAC CAACTCTCCT CGCATTGCTC GACTTGTAAT CTGCGAAATT TCCGCCTCAT 5340

GACCTGCCTC TCTCCCTAAA AGATCAATCA CTTCTTCTAG GATTAAGGTT CCATCTACAT 5400

CCAAAACACA CAAGCCTTTT ACTTGAGACA TCAGTTCTCC TCTCTAAACA GCCTAAAAAT 5460

CGTATGAAGT CATCATACGA TTTTATCTAT TAATTAACTA AACTATGGTA CAAGTCAAGG 5520

TATGACTTGC AGGCTGTATC CCATGAGAAG TCACTCTCCA TAGCTTGTTT TTGTAGGTTT 5580

CTCCAAATGT CTGGATGGTT TCTATACAAG TCCAATGCTG TTTGGAAAGT CCAATTTAAC 5640

CAATAAGGAG ATAGATTGTC AAAGCTAAAG CCAGTACCGC TTCCTTCGAT TGGATTGAAA 5700

GCGCGAACTG TATCTCGCAA GCCTCCAACT TCATGGACCA ATGGCAAGGT TCCATAACGC 5760

ATAGCCATCA TTTGAGACAA GCCACACGGT TCAAAACGAC TTGGCATGAG GAAGAGGTCA 5820

CAAGCAGCGT AGATTTCCTG AGCAAGTTTG ACATCAAAAG TGATATTTGT TGATAGCTTG 5880

TCTGGGTAAA TCTGAGCAAA CCATGAGAAA GCTCCTTCAA AGGCTGGATC GCCAGTTCCC 5940

AAAAGAACAA TCTGAACATC TTCTTGCAAG ATATGGTGAA GACTTTCGAC CACCACATCA 6000

AAACCTTTTT GACGTGTCAA ACGAGAAACA ATTCCCACCA GTGGAACGTC TGCTCTAACA 6060

GGCAAGCCAA CTCTTTCTTG CAATTTTGCC TTATTTTTGG CTTTCCCAGA CAAATCTTCC 6120

TGATTGAAAT GATAGTCTAA AAGAGCATCC GTCTGAGGAT TATAAAGATC AGCATCAATC 6180

CCATTCACGA TACCAGATAC TTTACCAGAC TCCATTTTAA GAATCTGATC CAAATTACAT 6240

CCAAACTGAC TAGTCATAAT TTCATGAGCA TAGCTAGGTG AAACGGTTGA AACACGGTTC 6300

GCATAGAGAA TACCTGCCTT CATCCAGTTC AGACAGTTGT TCCATCGAAG GGTGCCATCA 6360

GCGTAACGTT CAAAGCCAAC TCCAAACAAA TCACCCAACA TTCCTTCTGA AAATTGTCCT 6420

TGGAATTCTA AATTATGAAT GGTTAAAACT GTTTCAATGT CCTCATAGGC TTGAATCCAA 6480

CGGTATTTTT CCTTCAACAA GAAAGGAATC ATAGCTGTAT GGTAGTCATG AACATGGAGA 6540

AGATCAGGAA TAAAGTCAAT CCTTTCCATA GCCTCAATGG CAGCCAGTTG GAAAAAGGCA 6600

AAGCGTTCTC CGTCATCAAA ATCACCGTAA ACATGACCAC GGAAGAAATA ATATTGATTG 6660

TCAATAAAGT AGAAGGTTAC ACCATTTAAT ACTGTTTTCT TAATTCCACA ATACTGTCTG 6720

CGCCAACCAA CGCTCACCTC AAAATGAAGC ACATCTTCAA TCTGATTTCC AAATTTAGCC 6780

TCTACCATAT CATAGTAGGG TAAAATCACT GCAACTTCGT GCCCAGCTTT TACCAGTGAT 6840

TTTGGAAGAG CGCCAATGAC GTCTCCCAAA CCACCTGTTT TTGAAAAGGG TGCACCCTCT 6900

GCTGCTACAA ATAAAATTTT CATGAATGAA TATCCTCTGT TACTTTAGCA CCTTTCTTAA 6960

CCACAACTGG ATGTTCTGCA GTTCCTCGAA TCACAACACC ATGCTCAACT TCAACCCCTT 7020

TGTCCAAGAT AGCATATTCG ACCTGAGCCC CTTCTCCAAT AACAACACGA GGGAAGAGCA 7080

GGCTATCTTT AACCAAGCTA TCCTTATGGA CATGAATATT ACGTGATAGA ACAGAATTAG 7140

CTACTTGACC TTCAATAATA CTACCAGAGG CAAACTGAGA AGTGCTTACC TTAGATGTAT 7200

TAGCATAGTA AGTTGGCTCT TCGTTTTTGA CCTTTGTATA AATCTTTTGG TTTGGTGAGA 7260

AAAGAGAATA GAATTTTTGT GATTCAAGCA TATCGATATT CGCTTGATAA TAAGATTTAA 7320

CAGAGTGAAT ATTGGCTAGA TAGCCCGTGT ACTCGTAGGC GAAAGCTCCC TCTTTTACAG 7380

CCAAATCCCG TAAAACATAG CGCAATTTCT CTGGATGTTC TTTTTTAGCT TCTTCTTCCA 7440

AGTGTTCAAT CAACCAAGGT GTATCAACGA CAAAGATATC TGTAGACATA TTGAACGTTT 7500

CAGCTGTTGA CTTGCTATCA AAGAGTTTAT GAGAAAGAAC ATGGTCTGTT TCATCTACAT 7560

CCAAGATTGC ATTTACTTCT GAAATATCTT TCTTAGCTAG TTTTTTATAA ACTACAGTGA 7620

TAGGCTCTTT TGTTGTACTA TGTAGGTGGA AAACTTGGTT CAAATCAATG TTAATAAGAA 7680

CATCGCAGTT GAGGGCAACC GTTTGGTTTG AGCCAGAACG TTTCAAATAA GTAAGAAGCT 7740

GTTGGTAGTA TTCTTTTCCA ACTGTACTAC TTTCTACACG GGTATTGTAA ATTCCTAGAT 7800

AGTAATGGCT AAGAAGGGTT GATAAGCCCC ACTCGCGTCC TGAACGAATA TGGTCAAATA 7860

CTGAGCTGAT ATTATCCTGC TGGAAAATAC CAAAGACACT ACGAACACCT GCATTAGCAA 7920

GGCTTGAAAG TGGGAAGTCA ATCAAACGAT ATTTCCCACC AAATGGCAAA CTTGCTACTG 7980

GACGGTGGTC CGTCAATGTC GACATATTGT GAAAACCAAC TGTATTTCCT AAAATGGCAG 8040

AATATTTATC AATCTTCATC TGTTGCTACC CCCACTACTT CATTATATCC TACAACTTGT 8100

ACTTCATCTG TTCCATCAAT TTCGACACCG TCAGAAATAA TCGCACCTTC ACCAATAATG 8160

GCACGTTTAA TCTTAGCTCC TTGACCAATG ATAGCTCCAC TCATGATAAC TGAATCAAGG 8220

ACTTCCGCTC CTTCGCGAAC TTGCGCGCCT GTTGAAAGGA TAGAATGTTT AACAGTTCCA 8280

TCAACGAAAC ATCCGTCTAC AACTAATGAG TCTTCCACAT GAGCATTTGC CCCGAGGAAG 8340

TTTGGTGGTG AAATCAAGTT TCTTGAGTAA ATCTTCCATT GACGGTTACG ACTATCCAAG 8400

GCATTTTCTG GAGAAATATA CTCCATGTTC GCTTCCCAAA GTGACTCAAT AGTACCAACA 8460

TCTTTCCAAT AACCACTAAA TTCGTAAGCA TAAACACTTT CACCTGACTC AAGGTAATTT 8520

GGAATGACAT TTTTACCAAA GTCTGACATG CCAACCTTGC TCTTTTCAGC AGCGACTAAC 8580

ATATTACGAA GGCGTTGCCA ATCAAAAATG TAGATTCCCA TAGAAGCTTT TGTAGATTTA 8640

GGTTGAGCTG GTTTTTCTTC AAATTCAACA ATACGATTGT TAGCATCTGT GTTCATGATA 8700

CCAAAACGGC TTGCTTCTTT AAGAGGGACG TCTAAAACTG CTACTGTCAA GCTGGCATTA 8760

TTATCCTTAT GAGACTGGAG CATATCATCA TAGTCCATTT TGTAGATGTG ATCCCCAGAC 8820

AAAATCAAGA CATACTCAGG ATTGACACTG TCGATATAGT CGATATTTTG GTAAATAGCG 8880

TGACTAGTCC CCTCAAACCA ACGATTTCCT TCACTTGCAG AATAAGGTTG AAGAATAGAG 8940

ACACCTGAAT TAATACCGTC TAGTCCCCAG CTTGAACCAT TCCCAATATG GTTGTTGAGA 9000

GCAAGTGGTT GATACTGTGT AACGACCCCA ACATTGTGAA TCCCTGAGTT GGCACAGTTT 9060

GATAGGGCAA AGTCAATGAT ACGGTAGCGC CCACCAAATT GCACAGCTGG TTTTGCGATG 9120

CTTTGAGTGA GTTTACCGAG ACGAGTTCCT TGCCCACCAG CAAGAATCAA AGCTAACATT 9180

TCATTTTTCA TTTTCTACTC CTTTTTGGTT TTTATTTGTG ACGGTTTTAG TAGATTTCAA 9240

GCGACGTTTG ATTTTCCATA CACTTGCTCC CATAGCCGGT AGGGTAAAGG TTAAGGTCTG 9300

CTCATAATCT TTCCATAGTC CTTCTTGCGT TTGAACAGTT TGATTATGTT CTTTCCAAAC 9360

GCCTCCCCAC TCTTCCAACT CAGTATTCCA TACTTCTTCG TAAATTCCTG CAACGGGTAG 9420

TCCGATTGTA AAATCTTTCC GCTCAACAGG TACCATATTA AAGATACAGA CTAACATTTC 9480

TCCCTTTTTA CCCTTACGAA TAAAGGAAAG AACACTCTGG TCTCGATTAT CCGCATCAAT 9540

GATTTCAATA CCATCATAGC TGGTATCAAT TTCCCACAGA CAGCGATGAT CTTTGTAAAA 9600

CTGGTTTAGC TGAGAAGCGA AATACTTCAT CTTAGCATTC ATTGGGTCTT CTAGGTTAGA 9660

CCATTCCAAC TGTTCTTCAG ATTTCCATTC TAGGAATTGA CCGTATTCGC TACCCATGAA 9720

GAGCAATTTC TTACCAGGGT GACAAATTTG GTACGTATAG AGATTGCGCA AGCCTGCGAA 9780

TTGATTGTAA CGATCTCCCC ACATCTTATG CATCATACTC TTCTTGCCAT GAACCACTTC 9840

ATCGTGCGAG AATGGCAAGA GATAATTCTC CTTGAAAACA TACATAAAGC TGAAAGTCAC 9900

CAGGTTAAAG TCATATTTAC GATAGATCGG ATCTTCTTCG TAGAAACGGA GGATATCATT 9960

CATCCAGCCC ATGTTCCATT TGTAGTCAAA TCCTAGACCA CCAATCTCTT TCATTCCCGT 10020

AATCTTGATC GCAGACGAAC TTTCTTCTGC AATCATCATC ACATCTGGAT ATTCTAACTT 10080

AATAACCTCA TTCAAGCGCT GAAGGAAATA ATAACCTTCA TAGTTGAGAT TTCCGCCATC 10140

TTTATTAGGT GTCCATGGAG CATCATCATA GTCCAAATAG AGCATGTTGC TAACAGCATC 10200

CACACGAATA CCATCCAAAT GATAGACATC AATCCAATGC TTAATGCAAG AAATTAAGAA 10260

GGACTGGACT TCATTTTTTC CAAGGTCAAA ATTAAGGGCA CCCCAACCAT GGTTATGAGC 10320

CTTATTATGG TCTTGGTATT CAAAAGTCGG TGTCCCATCA TAATAGGCTA AGGCATCATC 10380

GTTGATGGTA AAGTGACTGG TACCCAGTCC ACAATAACCC CAATATTATG GGTATGACAC 10440

TCCTCGACAA AATCTTGAAA CTCCTCTGGT CGGCCATAAG CATGCTCTAA AGCGAAGTAA 10500

CCCATAAGCT GATACCCCCA ACTCAAGCCC AAAGGATGGG ACATCAAGGG CATAAACTCA 10560

ATATGAGTAT AGTTCATTTC AACGAGATAA GGAATGAGTT CATCCTTGAG CTGGGCAAAA 10620

CTATAAGGAC TGCCATCAGA ATTTCTTTTC CATGATCCAG CGTGAACTTC ATAAATATTG 10680

ACAGGACGCT CTTCAAAGCC CCAACGTTTT CTTCGTGCCA GCCAAAGTCC ATCCTTCCAT 10740

TTCTTCTCAG GAAGCTCTGT TACGATTGCC CCTGTTCCTG GACGAGCCTC ATACCTGACA 10800

GCAAAAGGGT CAATCTTCAT CAGTTGATGA CCATTTTGAC GTGTGACATG ATATTTGTAA 10860

ATATGCCCTT CTTGAGCCAT ATTGGTAAAG ACTTCCCAGA CCCCAAAATC ATTTCTTACC 10920

ATTGGAATCT GATTTTCAAT CCAGTTGGTA AAATCACCAA CCAAGTGAAC AGCCTGAGCA 10980

TTAGGTGCCC AAACACGGAA GGTATAGCCA TGCTCTCCAT TTAGTTCTTC CCTATGTGCT 11040

CCTAGATAAT GTTGGAGATA AAAATTTTCA CCCGTCATAA AGGTTTTTAA TGCTTCTCTA 11100

TTATCCATAT ACTCCCCTTC TCCTGTAAGC GTTTTCTATG TTTTTATTAT ACTACCTTTT 11160

TAGAGAAGAT TCAAGTAAAT TACTATACTT CTTTAATTAT TTTGAAAATC TACAACAAGT 11220

TCACTTACTC GTTCAATTGT AAATCAATAT TTTTTCAAAA AATTGCGAAA ACGCCTTTCT 11280

TTTTCTACTA TAGTGAAATG AAATAAAACA TGCGCAAATC GATTAAGGAA TTTAATCTAA 11340

TTTCTAACAA TGTCTTAGAA ATCAAAGTGT ACTATTTTAA CTCC 11384

(2) INFORMATION FOR SEQ ID NO: 46:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7577 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

TGTTGATTTG TTACTAGACG TTGACCAACG TCCTTCGGCT GGAAAAGGAA TTCTCCTTAG 60

TTTCCAACAC GTTTTCGCCA TGTTTGGTGC GACCATCTTG GTACCATTGA TTTTGGGAAT 120

GCCTGTATCT GTTGCCCTTT TTGCTTCAGG TGTTGGAACA CTCATCTACA TGATTGCTAC 180

TGGTTTTAAA GTTCCAGTTT ATCTAGGTTC TTCATTTGCC TTTATCACAG CTATGTCACT 240

GGCTATGAAA GAAATGGGGG GGGATGTATC TGCTGCCCAA ACAGGGGTTA TCTTGACTGG 300

TTTGGTCTAT GTCCTTGTTG CTACCAGCAT CCGATTTGTA GGAACAAAAT GGATTGATAA 360

ACTCTTGCCA CCAATCATTA TCGGTCCTAT GATCATCGTT ATCGGTCTTG GACTTGCAGG 420

TTCAGCTGTT ACCAATGCAG GTCTTGTAGC AGACGGAAAT TGGAAAAATG CTCTGGTAGC 480

CGTTGTTACT TTCCTAATTG CTGCCTTTAT CAATACAAAA GGAAAAGGCT TCCTACGAAT 540

CATTCCATTC CTCTTTGCCA TTATCGGTGG TTACCTTTTC GCACTAACTC TTGGCTTGGT 600

TGACTTTACA CCAGTTCTTA AAGCCAACTG GTTCGAAATT CCTGGTTTCT ACTTGCCATT 660

TAGCACAGGT GGTGCCTTTA AAGAGTACAA TCTTTACTTT GGTCCAGAAG CCATCGCTAT 720

CTTGCCAATC GCTATCGTAA CAATTTCTGA ACATATCGGA GACCATACTG TTTTGGGTCA 780

AATCTGTGGT CGTCAATTCT TAAAAGAACC AGGTCTTCAC CGTACTCTTC TTGGTGACGG 840

TATCGCAACT TCTGTTTCTG CCTTCCTTGG TGGACCAGCC AATACAACTT ACGGAGAAAA 900

TACAGGGGTT ATCGGTATGA CTCGTATCGC TTCTGTCTCA GTTATCCGTA ACGCTGCCTT 960

CATCGCGATT GCCCTCAGCT TCCTTGGTAA ATTCACTGCC TTGATTTCAA CTATTCCAAA 1020

CGCTGTACTT GGTGGTATGT CAATCCTTCT CTATGGGGTT ATCGCCAGCA ATGGTTTGAA 1080

AGTCTTGATT AAAGAACGTG TTGATTTCGC TCAAATGCGA AACCTCATCA TCGCAAGTGC 1140

TATGTTGGTT CTTGGACTTG GAGGAGCTAT CCTTAAACTT GGTCCAGTTA CACTTTCAGG 1200

TACTGCCCTT TCAGCCATGA CAGGAATCAT CTTGAACTTG ATCTTGCCAT ACGAAAATAA 1260

AGACTAAGAG TCTAAATACA CCTAATCCAC TCAGACAGCT GAGTGGATTT TTCGTATACC 1320

ATAATAAAAG TGTCTTAACA AAATTATTAA AATCAAAAAA CGTATAATAT CAGATATTCT 1380

AAAACCTTGA TACTGTACGT TTTATCATAG AAATTTTTAC TTTATTTTCT CATCAAATGA 1440

GATTTGCATC AATCTCTTGT CTTACTTGCG TTTCTTCTTC GCTTTCTTCA TTTTGTTAGC 1500

CATACGTTTC ATGGACTGTT TCATGGCAAA TTCACCAATT TTACCTTTCA AACCGCCACC 1560

AAACATCTGG CTCATATCTG GCATTCCTGC TCCTCCGAGA GCTGATAAGT CAGGCATACC 1620

GCCTTGTCCC ATCATTCCTT CAAGGGCAGA CATATCCATT CCTCCCATAT TTGGCATATT 1680

TTTAGGAAGG TTATTTGGAT TAATCCCCAT TTGCTTCATC ATTTTATTCA TATCCCCAGA 1740

CATAACACCC TGCATGAGCT GTTTAGCCTG GTTAAAGTCC TTGATGAATT TATTGACTTC 1800

GACGAATGTA TTTCCAGAAC CAGCAGCAAT ACGACGGCGA CGGCTTGGAT TTAACAAATC 1860

TGGGTTTTCA CGCTCTTCAG GTGTCATCGA AGACACAATG GCACGTTTAC GAGCAATCTG 1920

GCGTTCATCC ACCTTCATGT TTTGAAGGGC TGGATTGTTG GCCATACCTG GAATCATCTT 1980

GAGCAAGTCT TCCATCGGCC CCATATTTTG CACCTGATCT AATTGATCGA TGAAATCATT 2040

AAAATCAAAG GTGTTTTCGC GCATCTTCTC AGCCATTTCA AGGGCTTTTT GTTCATCGTA 2100

TTCCTGAGAA GCTTTCTCAA TCAAAGTGAG CATATCCCCC ATACCAAGGA TACGGCTAGA 2160

CATGCGGTCT GGGTGGAAGG TTTCAATGTC CGTAATCTTT TCACCTGTAC CAGTGAACTT 2220

GATTGGTTTT CCAGTAATGT GACGAACAGA CAGAGCAGCA CCACCACGAG TATCGCCATC 2280

AATCTTGGTA AGGATGACCC CAGTCACTTC CAACTGAGCA TTAAACTCAC GCGCAACATT 2340

GGCTGCTTCC TGACCAATCA TAGCATCAAC GACAAGCAAG ATTTCATTTG GTTGAGCCAA 2400

TGCTTTCACA TCACGAAGCT CATTCATGAG GAGCTCATCA ATCTGCAAAC GACCCGCAGT 2460

ATCAATCAAG ACATAGTCGT TATGATTAGT TTGGGCTTGC TCCAAACCTT GACGTACAAT 2520

CTCAACAGCT GGTACTTCTG TTCCAAGTGC AAAGACAGGC ACATCAATCT GTTGTCCCAA 2580

GGTCTTAAGC TGGTCAATGG CAGCTGGACG ATAAATATCC GCCGCAATCA TCAAAGGACG 2640

AGCATTTTCT TCTTTCTTGA GTTTGTTGGC CAATTTACCA GCAAAGGTTG TTTTACCAGC 2700

CCCTTGTAAA CCAACCATCA TGATGATGGT TGGAATCTTA GGTGACTTGA TAATTTCTGC 2760

CGTATCAGAA CCTAAAACGG CTGTCAATTC CTCATCAACG ATTTTAATAA TCTGTTGCGC 2820

AGGATTAAGT GTATCAATGA CCTCATGCCC GACTGCACGC TCACGAACTT TCTTGATAAA 2880

GTCCTTTACA ACAGGCAAGG CAACGTCGGC CTCGAGCAAG GCCAAGCGAA TTTCTTTGGT 2940

TGCCTCTTGG ACATCAGATT CAGAGATTTT TCCTTTTTTA CGTAGATTTT TAAAGACGTT 3000

CTGCAAACGT TCTGTTAAAC TTTCAAATGC CATTTTTCTT CCTCTTATTC TCTATTATCA 3060

ATGCTTGTTA AAATTTCTAT CTGCTCCTGC AGAAAGTCAT CCTTGGGATA GCGCTCCAAA 3120

ATCTGATCAA AAATCTGACT GCGGACAATA TAGTCCGAGT ACATGTGCAA TTTCATCTCA 3180

TAATCTTCCA GAATCTTTTC TGTTCGCTTG ATATTGTCAT AGACAGCCTG ACGACTGACA 3240

CCGAACTCCT CGGCAATTTC AGCAAGGCTG TAATCATCAG CGTAGTAGAG CTCGATATAA 3300

TTCATTTGCT TATCTGTCAA AAGCGCCGCA TAAAATTCAA AGAGCGCATT CATACGATTG 3360

GTTTTTTCGA TTTCCATAAC TTTTATTATA CCAAAAATTA GCCTAATCTA CCACACTAGG 3420

AAGCCGATCC AAGAAGATAG ATAGCTAAAT TTGAAAAAGA CATGAGCCTA GCCCCAAGTA 3480

ATTTCCAATT GATAGCTGGC AAAGGGATGT CCCTCTTGAT TTTGTAGTTG ATAATCTAGT 3540

TCAATCTTTT GCCTATCAAC TTGATAATGG CTCGTTTGGA TGATAAACTC CTGCATGCCC 3600

ATAGGTGTAG GAATATAGGC TAAACTATCG CTATCCTTTA GAAAGCGCAT AATGGTCTTG 3660

GGATTAGAAA ATCGGCTCAT CACAAGTTCT TGACCATGAA ATTTAATCAC TACTTTTTCC 3720

TTTTCCTCAT TATAGAAAAG CAGGTAGCTA TAATCTCCTT TTTCATGCAC TTCCACATCA 3780

TAAAGCTGGT CAATCACTTC CAACTGCTCA TCAAACTGAA TCGTATTTCG CATCCGAATC 3840

TTCACATCAG GCCCTCTTTC TTGTCTCTTG TCCTACTATT TTACCAAAAA GAGCAGGATT 3900

TTGCTATAAT GGTCATATGA ACGAAAAAGT ATTCCGTGAC CCTGTTCACA ACTACATCCA 3960

TGTCAATAAT CAAATCATCT ATGACTTGAT TAATACAAAA GAATTTCAGC GTTTGCGCCG 4020

GATCAAACAA CTGGGAACTT CCAGTTATAC CTTCCACGGT GGAGAACACA GTCGCTTCTC 4080

TCACTGTCTA GGAGTCTATG AAATTGCACG ACGCATCACA GAGATTTTCG AAGAAAAATA 4140

TCCTGAGGAA TGGAATCCTG CCGAGTCTCT CTTGACCATG ACCGCTGCTC TCCTACACGA 4200

CCTTGGGCAT GGTGCCTACT CCCATACTTT TGAACATCTC TTTGATACAG ACCATGAAGC 4260

CATTACTCAG GAGATTATTC AAAATCCTGA GACAGAGATT CACCAAGTCC TGCTACAAGT 4320

GGCACCTGAT TTCCCAGAAA AGGTGGCCAG TGTCATTGAC CATACCTATC CTAATAAGCA 4380

GGTCGTGCAG CTCATTTCTA GTCAGATTGA CGCAGATCGC ATGGACTATC TCTTGCGCGA 4440

CTCCTATTTT ACAGGAGCAT CCTATGGGGA ATTTGACCTG ACTCGAATCC TCCGAGTCAT 4500

TCGTCCTATC GAAAATGGTA TCGCCTTTCA GCGCAATGGC ATGCACGCCA TCGAAGACTA 4560

CGTCCTCAGT CGCTACCAGA TGTACATGCA GGTTTATTTC CACCCCGCAA CACGCGCCAT 4620

GGAAGTTCTC CTACAGAATC TTCTCAAACG CGCCAAGGAA CTCTATCCTG AGGACAAGGA 4680

TTTCTTTGCC CGAACTTCTC CACACCTCCT GCCTTTCTTC GAAAAAAATG TGACCTTGAC 4740

TGACTATCTG GCTCTGGATG ATGGCGTGAT GAATACCTAC TTCCAGCTTT GGATGACCAG 4800

TCCTGACAAG ATTCTTGCAG ATTTATCGCA TCGCTTTGTC AACCGCAAGG TCTTTAAATC 4860

CATTACCTTT TCACAAGAGG ACCAAGATCA ACTTACTAGC ATGAGAAAAT TGGTTGAGGA 4920

TATCGGCTTT GATCCCGACT ACTACACTGC CATTCATAAG AACTTTGACC TCCCTTATGA 4980

TATCTATCGT CCCGAATCTG AAAACCCACG GACACAGATT GAGATTTTAC AAAAAAATGG 5040

AGAACTGGCC GAACTCTCTA GCCTGTCTCC TATCGTCCAA TCCCTTGCTG GCAGTCGCCA 5100

CGGAGATAAT CGCTTTTATT TTCCAAAAGA AATGTTGGAC CAAAACAGCA TCTTTGCAAG 5160

CATTACCCAG CAATTTTTAC ACTTGATTGA GAACGATCAT TTTACCCCAA ATAAAAACTA 5220

GAAGAGGAAA TTTATGAGTA TTAAACTAAT TGCCGTTGAT ATCGACGGAA CCCTTGTCAA 5280

CAGCCAAAAG GAAATCACTC CTGAAGTTTT TTCTGCCATC CAAGATGCCA AAGAAGCTGG 5340

TGTCAAAGTC GTGATTGCAA CTGGCCGCCC TATCGCAGGC GTTGCCAAAC TTCTAGACGA 5400

CTTGCAGTTG AGAGACGAGG GGGACTATGT GGTAACCTTC AACGGTGCCC TTGTCCAAGA 5460

AACTGCTACA GGACATGAGA TTATCAGCGA ATCCTTGACT TATGAGGATT ATCTAGATAT 5520

GGAATTCCTC AGTCGCAAGC TCGGTGTCCA CATGCATGCC ATTACCAAGG ACGGTATCTA 5580

TACTGCAAAT CGCAATATCG GAAAATACAC TGTACACGAA TCAACCCTCG TCAGCATGCC 5640

TATCTTCTAC CGTACCCCTG AAGAAATGGC TGGCAAAGAA ATTGTTAAAT GTATGTTTAT 5700

CGATGAACCA GAAATTCTCG ATGCTGCGAT TGAAAAAATT CCAGCAGAAT TTTACGAGCG 5760

CTACTCCATC AACAAATCTG CTCCTTTCTA CCTCGAACTC CTTAAAAAGA ATGTAGACAA 5820

GGGTTCAGCC ATTACTCACT TGGCTGAAAA ACTCGGATTG ACCAAAGATG AAACCATGGC 5880

AATCGGTGAT GAAGAAAATG ACCGTGCCAT GCTGGAAGTC GTTGGAAACC CCGTTGTCAT 5940

GGAAAATGGA AATCCAGAAA TCAAAAAAAT CGCCAAATAC ATCACCAAAA CAAATGACGA 6000

ATCCGGCGTT GCCCATGCCA TCCGAACATG GGTACTGTAA AAGTATCATT TTTCAATAAG 6060

AATTGATTAG CAATAAAATC CAATGAATTT TTTTAGCAAA CTATTTAATT TAAAACAAAA 6120

TAATCATAAT AGAGACACAA ATTCTGATTG TAACAATTTT TACCTAAACG AATTAGAATG 6180

TGGCCTTACT CCTGGGCAAC TCATACTCAT AGATTGGACT CAAAAAACAG GGAGAAATTA 6240

TAATTTCCCA AGATATTTTA AATACTCTCT TCAAATTGAC CCTGAATCTA CACACAATCA 6300

ATTATACAAA TTAGGATACT TCACTAAAAA TAAGACTTTA TCATATCTTA CAGTAGTAGA 6360

ATTAAAAACT ATATTATCTA AACATAATTT AGCTACTTCT GGAAAAAAAG CAGAATTAAT 6420

TACAAGAATA ATTAATAATG TTAACATTGA CAATTTAGAT ATTCCGTTCG AATTTAAACT 6480

AACAAAAGAA GCACAAAATC TTATTATCGA ACATAGTGAC TATATCAAAG CATACTATGA 6540

TAAAGACATA ACTATGGAAG ATTATTGTAA AGAAAAAAAC AATATCTCTT TTAAAGCAAC 6600

TTTTGGTGAT ATAAAATGGA GTCTCTTAAA TAAACAAGCT CATAGGAATA CTGTATCAGG 6660

AGATTTTGGA TGCTTATCTA ACACACGAAA GGCTCAGGGA AGACATTTGG AACAAGAAGG 6720

TAATATTAAA CATGCTTTAA TATATTACAT AGAATCTTTG ATAATTACTA TTTCAGGATT 6780

AGAAAACAAT TTTTCAGCCA CTGATTATCC AGTATATTAT CCCGATTCGA TACCTGACTA 6840

CTCACTAAAA CATATTCAAA CATTAATGGA ATCATTATCT GATGACGATT ATGATTTTGC 6900

TTTTGATGAA GCATTATTTC GCTTCTCAAT TTTGAATGCA AATCATTTTT TATCTAAGGA 6960

AGATATTGAC TATTTAAGAG TTAATTTACC TCGTTCCACT GCTGAAGAAA TAAACAATTA 7020

CTTAAAGAAA TATGAATGTT ATAGTCCTTT AAATAATTTA GAACTTGACG ATTTTGAATA 7080

AATTGACTAT ACAAACATTT ATATACTCGA TATAGTCTCA ATTTTATCTG ATGATTGCCC 7140

AAATTTTTCA ATAATAAAAC GCATAATATT ATGGAGACAA TCCCCTATAT TATGCGTTCT 7200

TTTAATATCA AAGACTTTTT GACAAACTTC TTTGATATCT AATTACATGC CCCCTGCAGG 7260

AATCGAACCT GCAACTACTC CTTAGGAGGG AGTTGTTATA TCCATTGAAC TAAGGGAGCT 7320

AGATAAAAAC TCTGCTAAAT GAGCAGAGTT TTTTAGTCGA ATTAACGACG GATTTCTTTG 7380

ATACGAGCTG CTTTACCTTG AAGAGCACGC AAGTAGTACA ATTTCGCACG ACGTACTTTA 7440

CCGTAACGAA CAACTTCGAT TTTTTCAACA CGTGGAGTGT GGATTGGGAA GATACGCTCA 7500

ACACCTACAC CGTTAGAGAT TTTACGAACT GTGTAGTTTT CTGAGATTCC AGCACCTTTA 7560

CGTGCGATAA CAACACG 7577

(2) INFORMATION FOR SEQ ID NO: 47:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4945 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

CCTCGCTGAT GATTGGTGCT GTTTTATTTG CTGGTCCAGC CTTGGCTGAA GAAACTGCAG 60

TTCCTGAAAA TAGCGGAnCT AATACAGAGC TTGTTTCAGG AGAGAGTGAG CATTCGACCA 120

ATGAAGCTGA TAAGCAGAAT GAAGGGGAAC ATGCTAGAGA AAACAAGCTA GAAAAGGCAG 180

AAGGAGTAGC GATAGCATCT GAAACTGCTT CGCCAGCAAG CAATGAAGCT GCAACTACTG 240

AAACTGCAGA AGCAGCTAGC GCAGCTAAAC CAGAGGAAAA AGCAAGTGAG GTGGTTGCAG 300

AAACACCATC TGCAGAAGCA AAACCTAAGT CTGACAAGGA AACAGAAGCA AAGCCCGAAG 360

CAACTAACCA AGGGGATGAG TCTAAACCAG CAGCAGAAGC TAATAAGACT GAAAAAGAAG 420

TCCAGCCAGA TGTCCCTAAA AATACAGAAA AAACATTAAA ACCAAAGGAA ATCAAATTTA 480

ATTCTTGGGA AGAATTGTTA AAATGGGAAC CAGGTGCTCG TGAAGATGAT GCTATTAACC 540

GCGGATCTGT TGTCCTCGCT TCACGTCGGA CAGGTCATTT AGTCAATGAA AAAGCTAGCA 600

AGGAAGCAAA AGTTCAAGCC TTATCAAACA CCAATTCTAA AGCAAAAGAC CATGCTTCTG 660

TTGGTGGAGA AGAGTTCAAG GCCTATGCTT TTGACTATTG GCAATATCTA GATTCAATGG 720

TCTTCTGGGA AGGTCTCGTA CCAACTCCTG ACGTTATTGA TGCAGGTCAC CGTAACGGGG 780

TTCCTGTATA CGGTACACTC TTCTTCAACT GGTCTAATAG TATTGCAGAT CAAGAAAGAT 840

TTGCTGAAGC TTTGAAGCAA GACGCAGATG GTAGCTTCCC AATTGCCCGT AAATTGGTAG 900

ACATGGCCAA GTATTATGGC TATGATGGCT ATTTCATCAA CCAAGAAACA ACTGGAGATT 960

TGGTTAAACC TCTTGGAGAA AAGATGCGCC AGTTTATGCT CTATAGCAAG GAATATGCTG 1020

CTAAGGTAAA CCATCCAATC AAGTATTCTT GGTACGATGC CATGACCTAT AACTATGGAC 1080

GTTATCATCA AGATGGTTTG GGAGAATACA ACTACCAATT CATGCAACCA GAAGGAGATA 1140

AGGTTCCGGC AGATAACTTC TTTGCTAACT TTAACTGGGA TAAGGCTAAA AATGATTACA 1200

CTATTGCAAC TGCCAACTGG ATTGGTCGTA ATCCTTATGA TGTATTTGCA GGTTTGGAAT 1260

TGCAACAGGG TGGTTCCTAC AAGACAAAGG TTAAGTGGAA TGACATTTTA GACGAAAATG 1320

GGAAATTGCG CCTTTCTCTT GGTTTATTTG CCCCAGATAC CATTACAAGT TTAGGAAAAA 1380

CTGGTGAAGA TTATCATAAA AATGAAGATA TCTTCTTTAC AGGTTATCAA GGAGACCCTA 1440

CTGGCCAAAA ACCAGGTGAC AAAGATTGGT ATGGTATTGC TAACCTAGTT GCGGACCGTA 1500

CGCCAGCGGT AGGTAATACT TTTACTACTT CTTTTAATAC AGGTCATGGT AAAAAATGGT 1560

TCGTAGATGG TAAGGTTTCT AAGGATTCTG AGTGGAATTA TCGTTCAGTA TCAGGTGTTC 1620

TTCCAACATG GCGCTGGTGG CAGACTTCAA CAGGGGAAAA ACTTCGTGCA GAATATGATT 1680

TTACAGATGC CTATAATGGC GGAAATTCCC TTAAATTCTC TGGTGATGTA GCCGGTAAGA 1740

CAGATCAGGA TGTGAGACTT TATTCTACTA AGTTAGAAGT AACTGAGAAG ACCAAACTTC 1800

GTGTTGCCCA CAAGGGAGGA AAAGGTTCTA AAGTTTATAT GGCATTCTCT ACAACTCCAG 1860

ACTACAAATT CGATGATGCA GATGCATGGA AAGAGCTAAC CCTTTCTGAC AACTGGACAA 1920

ATGAAGAATT TGATCTTAGC TCACTAGCGG GTAAAACCAT CTATGCAGTC AAACTATTTT 1980

TCGAGCATGA AGGTGCTGTA AAAGATTATC AGTTTAACCT AGGACAATTA ACTATCTCGG 2040

ACAATCACCA AGAGCCACAA TCGCCGACAA GCTTTTCTGT AGTGAAACAA TCTCTTAAAA 2100

ATGCCCAAGA AGCGGAAGCA GTTGTGCAAT TTAAAGGCAA CAAGGATGCA GATTTCTATG 2160

AAGTTTATGA AAAAGATGGA GACAGCTGGA AATTACTAAC TGGCTCATCT TCTACAACTA 2220

TTTATCTACC AAAAGTTAGC CGCTCAGCAA GTGCTCAGGG TACAACTCAA GAACTGAAGG 2280

TTGTAGCAGT CGGTAAAAAT GGAGTTCGTT CAGAAGCTGC AACCACAACC TTTGATTGGG 2340

GTATGACTGT AAAAGATACC AGCCTACCAA AACCACTAGC TGAAAATATC GTTCCAGGTG 2400

CAACAGTTAT TGATAGTACT TTCCCTAAGA CTGAAGGTGG AGAAGGTATT GAAGGTATGT 2460

TGAACGGTAC CATTACTAGC TTGTCAGATA AATGGTCTTC AGCTCAGTTG AGTGGTAGTG 2520

TGGATATTCG TTTGACCAAG CCACGTACCG TTGTTAGATG GGTCATGGAT CATGCAGGAG 2580

CTGGTGGTGA GTCTGTTAAC GATGGCTTGA TGAACACTAA AGACTTTGAC CTTTATTATA 2640

AAGATGCAGA TGGTGAGTGG AAGCTAGCTA AGGAAGTCCG TGGTAACAAA GCACACGTGA 2700

CAGATATCAC TCTTGATAAA CCAATCACTG CTCAAGACTG GCGCTTGAAT GTTGTCACTT 2760

CTGACAATGG AACTCCATGG AAGGCTATTC GTATCTATAA CTGGAAAATG TATGAAAAGC 2820

TTGATACTGA GAGTGTCAAT ATTCCGATGG CCAAGGCTGC AGCCCGTTCT CTAGGCAATA 2880

ACAAGGTACA AGTTGGCTTT GCAGATGTAC CGGCTGGAGC AACTATTACC GTTTATGATA 2940

ATCCAAATTC TCAAACTCCG CTCGCAACCT TGAAGAGCGA AGTTGGAGGA GACCTAGCAA 3000

GTGCACCATT GGATTTGACA AATCAATCTG GTCTTCTTTA TTATCGTACC CAGTTGCCAG 3060

GCAAGGAAAT TAGTAATGTC CTAGCAGTTT CCGTTCCAAA AGATGACAGA AGAATCAAGT 3120

CAGTCAGCCT AGAAACAGGA CCTAAGAAAA CAAGCTACGC CGAAGGGGAG GATTTGGACC 3180

TTAGAGGTGG TGTTCTTCGA GTTCAGTATG AAGGAGGAAC TGAGGACGAA CTCATTCGCC 3240

TAACTCACGC AGGTGTATCA GTATCAGGTT TTGATACGCA TCATAAGGGA GAACAGAATC 3300

TTACTCTCCA ATATTTGGGA CAACCGGTAA ATGCTAATTT GTCAGTGACT GTCACTGGCC 3360

AAGACGAAGC AAGTCCGAAA ACTATTTTGG GAATTGAAGT AAGTCAGGAA CCGAAAAAAG 3420

ATTACCTAGT TGGTGATAGC TTAGACTTGT CTGAAGGACG CTTTGCAGTG GCTTATAGCA 3480

ATGACACCAT GGAAGAACAT TCCTTTACTG ATGAGGGAGT TGAAATTTCT GGTTACGATG 3540

CTCAAAAGAC TGGTCGTCAA ACCTTGACGC TTCATTACCA AGGCCATGAA GTTAGCTTTG 3600

ATGTTTTGGT ATCTCCAAAA GCAGCATTGA ACGATGAGTA CCTCAAACAA AAATTAGCAG 3660

AAGTTGAAGC TGCTAAGAAC AAGGTGGTCT ATAACTTTGC TTCATCAGAA GTAAAAGAAG 3720

CCTTCTTGAA AGCAATTGAA GCGGCCGAAC AAGTGTTGAA AGACCATGAA ACTAGCACCC 3780

AAGATCAAGT CAATGACCGA CTTAATAAAT TGACAGAAGC TCATAAAGCT CTGAATGGTC 3840

AAGAGAAATT TACGGAAGAA AAGACAGAGC TTGATCGCTT AACAGGTGAG GTTCAAGAAC 3900

TCTTGGCTGC CAAACCAAAC CATCCTTCAG GTTCTGCCCT AGCTCCGCTT CTTGAGAAAA 3960

ACAAGGCCTT GGTTGAAAAA GTAGATTTGA GTCCAGAAGA GCTTACAACA GCGAAACAGA 4020

GTCTAAAAGA TCTGGTTGCT TTATTGAAAG AAGACAAGCC AGCAGTCTTT TCTGATAGTA 4080

AAACAGGTGT TGAAGTACAC TTCTCAAATA AAGAGAAGAC TGTCATCAAG GGTTTGAAAG 4140

TAGAGCGTGT TCAAGCAAGT GCTGAAGAGA AGAAATACTT TGCTGGAGAA GATGCTCATG 4200

TCTTTGAAAT AGAAGGTTTG GATGAAAAAG GTCAAGATGT TGATCTCTCT TATGCTTCTA 4260

TTGTGAAAAT CCCAATTGAA AAAGATAAGA AAGTTAAGAA AGTATTTTTC TTACCTGAAG 4320

GCAAAGAGGC AGTAGAATTG GCTTTTGAAC AAACGGATAG TCATGTTATC TTTACAGCAC 4380

CTCACTTTAC TCATTATGCC TTTGTTTATG AATCTGCTGA AAAACCACAA CCTGCTAAAC 4440

CAGCACCACA AAACACAGTC CTTCCAAAAC CTACTTATCA ACCGACTTCT GATCAACAAA 4500

AGGCTCCTAA ATTGGAAGTT CAAGAGGAAA AGGTTGCCTT TCATCGTCAA GAGCATGAAA 4560

ATACTGAGAT GCTAGTTGGG GAACAACGAG TCATCATACA GGGACGAGAT GGACTGTTAA 4620

GACATGTCTT TGAAGTTGAT GAAAACGGTC AGCGTCGTCT TCGTTCAACA GAAGTCATCC 4680

AAGAAGCGAT TCCAGAAATT GTTGAAATTG GAACAAAAGT AAAAACAGTA CCAGCAGTAG 4740

TAGCTACACA GGAAAAACCA GCTCAAAATA CAGCAGTTAA ATCAGAAGAA GCAAGCAAAC 4800

AATTGCCAAA TACAGGAACA GCTGATGCTA ATGAAGCCCT AATAGCAGGC TTAGCCAGCC 4860

TTGGTCTTGC TAGTTTAGCC TTGACCTTGA GACGGAAAAG AGAAGATAAA GATTAAATAT 4920

CGAAAAATCT TGTGAAATCT TTCCG 4945

(2) INFORMATION FOR SEQ ID NO: 48:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25002 base pairs
(B) TYPE: nucleic acid

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

GACAACTCAA GTAGCTTTTT CTTATTTTGA AAAAGGAGAT CAGAGTTTAA CTATGTCAGA 60

AAAATCACAA TGGGGGTCGA AACTTGGTTT TATTCTAGCA TCTGCTGGCT GGCCATCGGG 120

CTTGGTTCCG TTTGGAAGTT TCCCTACATG ACTGCTGCTA ATGGCGGTGG AGGCTTTTTA 180

CTAATCTTTC TCATTTCCAC TATTTTAATC GGTTTCCCTC TCCTGCTGGC TGAGTTTGCC 240

CTTGGCCGTA GTGCTGGCGT TTCCGCTATC AAAACCTTTG GAAAACTGGG CAAGAATAAC 300

AAGTACAACT TTATCGGTTG GATTGGCGCC TTTGCCCTCT TTATCCTCTT ATCTTTTTAC 360

AGTGTTATCG GAGGATGGAT TCTAGTCTAT CTAGGTATTG AGTTTGGGAA ATTGTTCCAA 420

CTTGGTGGAA CGGGTGATTA TGCTCAGTTA TTTACTTCAA TCATTTCAAA TCCAGCCATT 480

GCCCTAGGAG CTCAAGCGGC CTTTATCCTA TTGAATATCT TCATTGTATC ACGTGGGGTT 540

CAAAAAGGGA TTGAAAGAGC TTCGAAAGTC ATGATGCCCC TGCTCTTTAT CGTCTTTGTT 600

TTTATCATCG GTCGCTCTCT CAGTTTGCCA AATGCCATGG AAGGGGTTCT TTACTTCCTC 660

AAACCAGACT TTTCAAAACT GACTAGCACT GGTCTCCTCT ATGCTCTGGG ACAATCTTTC 720

TTTGCCCTCT CACTAGGGGT TACAGTCATG TTGACCTATG CTTCTTACTT AGACAAGAAA 780

ACCAATCTAG TCCAGTCAGG AATCTCCATC GTAGCCATGA ATATCTCGAT ATCCATCATG 840

GCAGGTCTAG CCATTTTCCA AGCTCGATCC CCCTTCAATA TCCAGTCTGA AGGGGGACCC 900

AGCCTGCTCT TTATCGTCTT GCCTCAACTC TTTGACAAGA TGCCTTTTGG AACCATTTTC 960

TACGTCCTCT TCCTCTTGCT CTTCCTTTTT GCGACAGTCA CTTTTTCTGT CGTGATGCTG 1020

GAAATCAATG TAGACAATAT CACCAACCAG GATAACAGCA AACGTGCCAA ATGGAGTGTT 1080

ATTTTAGGAA TTTTGACCTT TGTCTTTGGC ATTCCTTCAG CCCTATCTTA CGGTGTCATG 1140

GCGGATGTTC ACATTTTTGG TAAGACCTTC TTTGACGCTA TGGACTTCTT GGTTTCCAAT 1200

CTCCTCATGC CATTTGGAGC TCTCTACCTT TCACTTTTTA CAGGCTATAT CTTTAAAAAG 1260

GCTCTTGCAA TGGAGGAACT CCATCTCGAT GAAAGAGCAT GGAAACAAGG ACTGTTCCAA 1320

GTCTGGCTCT TCCTTCTTCG TTTCTTCGTT TCGTCATTCC AATCATCATC ATTGTGGTCT 1380

TCATTGCCCA ATTTATGTAA TCAAAAAGGA CTTGAGTAGT GAACTCAGGC CCTTTCTTTT 1440

TATGGATGGC TAACAATCAA TTCCAAACCT TGCCCTTCCA GAGTCCAAGC TTCAACATCA 1500

CTTGGTAGGA TAAAGTGGCT GCCTTTTTGA ATTGGATAAT TTTTCCCGTC AACAGTTAGC 1560

TGACCTTGAC CAGCCAAGAC ACTCAATAAG CTGTAGTCAG CTGTCTTTTC AAAGTCAACT 1620

TTTCCAGTAA TTTCCCACTT GTAAACTGCG AAGAAATCAT TAGATACAAG GAGAGTGGAA 1680

CGCAAATCAT CTGCTTTAAC AGTTACAGGA CGGCTATTTG CTGGCTCACC AATGTTCAAG 1740

ACATCGATGG ATTTTTCAAG ATGAAGTTCA CGCAAGTTGC CTTTGTCATC CTTGCGGTCA 1800

AAGTCATAGA CGCGATAGGT GGTATCGCTA GACTGCTGGG TTTCAAGGAT TAAGATACCC 1860

GCCCCGATAG CGTGCATAGT CCCGCTTGGT ACATAGAAGA AATCTCCAGC CTTAACAGGG 1920

ACTTTGGTCA ACAAGTCATC CCAGTTCTTG TCCTCGATTT GCTGGCGGAG TTCTTCTTTT 1980

GACTTGGCAT TGTGACCGTA GATAATCTCT GAACCTTCAT CCGCTGCGAT AATGTACCAG 2040

CATTCTGTTT TTCCGAGTTC GCCTTCATGC TCGAGTCCAT AAGCATCGTC TGGGTGAACT 2100

TGGACACTGA GCCAGTCGTT GGCATCGAGG ATCTTGGTCA AAAGTGGAAA TACAGGTTCT 2160

GGACGATTGC CAAATAATTC ACGGTGTTCC GCATACAAAG TAGCAAGATC TGTTCCCTCG 2220

TAACGACCAT TGGCAACTTT AGAGACTCCA TTTGGATGGG CTGAGATGGC CCAATATTCT 2280

CCGATTTTTT CACTTGGGAT GTCGTAGCCA AACTCATCAC GTAGCTTGGC TCCACCCCAG 2340

ATTTTTTCTT GCATAACTGA TTGTAAAAAT AATGGTTCTG ACATGTCGAT CTCCTGTCTG 2400

ATTTTTCTCC CCTCATTATA GCAAAAAAAG AGTTCGAATT GAACTCTTTT TTACATCTTA 2460

TAAAGCAGGG AGAAGATTTT ATAAAAATAG TAAACAAATG TGCTCTACCC GATGCTTGCA 2520

CCATTGCTAT AAATGACATC CTTGTACCAA TAGAAGGACT TCTTCTTGCT ACGTTTGAGA 2580

GCTCCGTTTC CTACATTATC TCGATCTACA TAGATAAAGC CATAGCGCTT ATTCATTTCC 2640

CCTGTGCCAG CTGAAACCGG ATCGATACAG CCCCAAGTCG TATAACCAAG CAAGTCAACC 2700

CCGTCTTGGT AAATGGCATC TCGCATGGCC TTGATGTGGG CCTCTAAGTA AGTAATCCGA 2760

TAGTCATCTG CTACATAACC ATTCTCATCC GGTGTATCCA TAGCACCGAG TCCATTTTCT 2820

ACGATAATAC TAAACTAAAA TCAAAAAGCA TTATATAATA GTGATATGAA ATCAACTAAA 2880

GAAGAAATCC AAACCATCAA AACACTTTTA AAAGACTCTC GTACAGCTAA ATATCATAAA 2940

CGCCTTCAAA TCGTTCTATA GTAAAATGAA ATAAGAACAG TACAAATCGA TCAGGACAGT 3000

CAAATCGATT TCTAACAATG TTTTAGAAGT AGGGGTGTAC TATTCTAGTT TCAATCTACT 3060

ATATTTCGTC TGATGGGCAA ATCTTATAAA GAGATTATAG AACTTTTATA GTAGTTTGAA 3120

ATAAGATGTG AACAACTCTA TCAGGAAAGT CAAATTAATT TATAGAAATA TTTTAGCAGC 3180

CAAGGTGTAC TGTTATAGAT TCAATACACT ATAGACTGTA ATCAAACAAC GATTTGGCGA 3240

AATGTAAAAA AATATGAGGA GTTCGGACTC GACTCTCTCC TTCAAGAAAC ACGTGGTGGT 3300

CGTAACCATG CATATATGAC AGTTGAGGAA GAGAAAGCCT TTCTTGCCCG CCATTTGAAG 3360

GCTACAGAGG CAGGAGAATT TGTTACAATT GATGCCTTAT TTCAGGCTTA TAAAAAGGAG 3420

TTAGGTCGTT CCTACACACG TGATGCCTTC TATCAACTGT TGAAGCGCCA TGGTTGGCGA 3480

AATATTACGC CACGTCCAGA ACATCCTAAG AAAGCAGACG CTCAAACCAT TGTTGCGTCT 3540

AAAAATAAAA TCTCAATCCA AGAAGGCAAG AAAGCGTTTT AAATATAGTA GACGTTTTCG 3600

TAAGGTTTGC TTGATGTACC AAGCTGAAGC TGGTTTCGGT AGAATCAGTA AACTGGGATC 3660

TTGTTGGGCT CCAATAGGAG TAGGTCCACA TATCCATAGT CACTATATAC GAGAATTTCG 3720

CTATTGTTAT GGAGCTGTTG ATGCCTATAC AGGCGAATCA TTTTTCTTAA TAGCTGGTAG 3780

ATGTAATACT GAGTGGATGA ACGCCTTTTT AGAAGAGCTT TCACAAGCTT ATCCTTTTAC 3840

TCGTTATGGA CAATGCTATA TGGCATAAAT CAAGTACCTT AAAGATTCCG ACTAATATTG 3900

GTTTTGCATT TATTCCTCCA TACACACCAG AGATGAACCC CATTGAACAA GTGTGGAAAG 3960

AGATTCGTAA ACGTGGATTT AAGAATAAAG CCTTTCGAAT TTTGGAAGAT GTCATGAATC 4020

AACTCCAAGA TGTCATACAA GGATTGGAGA AGGAGGTGAT AAAGTCCATC GTTAATCGGA 4080

GATGGACTAG AATGCTTTTT GAAAGCAGAT GAGTATTATA TGCAATTTCT TTATATAAAA 4140

AGACCGGATT GCTCCGATCT TTCAATAGTT CATATTCTCA ATTTCTATTT TAAAAATAGC 4200

TAAGGTTAAC GTCAAATGAC TACGCGACCT ATTTCATACG ATAAAAATCA AGCACTAGAC 4260

CAGCAGGTCC TTGAACTAAT AAGGACTCTG TTCCCCAATC GGTTACAGTT GGTCCGTGTA 4320

AAACCTTTAT ACCAAGCTCG TTCAACCGTT TGTAGTTCTG GTCTACATCC TCAACCTCGA 4380

TATGAATAAT GATTCCTGAC TGAAAGTTTT CCAAAGGAAC CAAATGATTT TGTGACAACA 4440

TAAGGCAGTG ACTACCAATC GTAAACTGAG CAAAACCATC ATTAGCATAA TCTGCCTTTT 4500

TATCCAAGAT ATGCTCCAAG TCAGCACAGA CTTGGGGAAC ATTTGAAACG ATAATATCTA 4560

ATTGATTTAA ATTCATTTAC TCTCCTCCAT AAAAAGACCG GATTGCTCCG ATCTTTTAAA 4620

GTTCTGCTCT ATGAAAATCA AAGAATAAAG TCTACAAGTT TCATATTTGA TTTTCGGCGA 4680

GAGGAATTAT TTAATTGCGC GTGATTGCAA TCCTTCTTCT TCCAAGAAGA GACGGAATGG 4740

TACGAGTTCT TCTGCTTCGT ATTTTTCCTT GAAGGCTTTG ATAGCTTCTT CTGAGTGAAG 4800

TTTTGGATCC AATTCAAGTA CTTCTACTGG AAGTGGACGG TGTTGAGTGA TGCGAGCATC 4860

GATGACAACA GTTTTACCTT CTTTGTTCAA TTTAACAGCT TCTGCAACAA CTGCATCGAT 4920

GTCTTCGATA CGGTCAACTG TGAATCCAAC AGCTCCTTGA GCTTCCGCAA TTTTAGCGTA 4980

GTCAGCGTTT GTGAAGTCTA CACCAAACAA GTGTTTGTTT GTATCTTCGT ATTTGTTCTT 5040

GATGAAGCCG TACTCAGCAT TTGAGAAGAC AAGGTTGATA ACTGGAAGGT CGTATTGAAC 5100

GTTTGTGATA ACGTCTGGGT AGCACATGTT GAATGCTCCG TCACCCATGA TGTTCCATAC 5160

TTGGCGATCT GGATTGTCTT TCTTAGCAGC GATACCACCA GGAAGGGCAA TACCCATTGT 5220

CGCAAAGAGT GGAGATGTAC GCCACATGTT CTTAGGTGTC ATGTGAAGGT GACGAGTAGA 5280

TGTTTGAGTA GTGTTACCTA CGTCGATTGA GTAGATAGCG TCTTGATCAG CATGTTTGTT 5340

GATTGCATTG TAAACTTGAT ACAATTGCAA TTCACCCTCA GTTTTACCTT CGAGTTTGTT 5400

CATGTAATCA CGCCAGTTTT GGTTGTTCTT AACGTTTGCA CGCCACCATG GAGTTGATTC 5460

AACTGGGTTT ACTTTGTCAA GGATAGCTTT AGCTGCTTGA CCAGCATCAC CAAGGATTGA 5520

AGCGTCAAGG GCATGACGTT TACCAAGTTT GTAAGGGTCG ATATCGACTT GGATGAATTT 5580

TTCAGTGTTC TTGAATGCTT CGTAAACTTC AGCAAATGGG AAGTTTGAAC CAAGGAAAAG 5640

AACTGTGTCT GCTTCAAAGA CCACTTCGTT GGCTGGTTTC CAACCAACAC GGTAAGCAGA 5700

ACCTGTCAAA CCTTCATAGT TCCATTCGAA AGCTTCAAAG TTTTTACCAG TTGTGATGAT 5760

TGGTGCTTTG ATTTTACGTG ACAATTCAGT AATCACTTCA CCAGCTTTAA CACCACCAAA 5820

TCCAGCATAG ATAACTGGGC GTTCAGCATT GTTCAAGATT TCAACAGCTT TGTCGATTTC 5880

AACTTCGTTC AAAGCAGGAG CGATGAATGA GCGTTCGTAT GAACCTGAAC CGTAGTATGA 5940

GTTTTCATCG ATTTCTTGGA AACCGAAGTT TACTGGAATT TCAACAACAG CTGGACCTTT 6000

TTTAGAAACT GCAGCACGGC AGGCTTCGTC AATTACTTTT GGCAATTGCT CAGCGTAAGC 6060

TACACGTTTG TTGTAAACAG CGATACCGTT GTACATTGGG TTTTGGTTAA GCTCTTGGAA 6120

AGCATCCATG TTCAATTCGT TAACTGGACG TGATCCAAGG ATCGCTAGGA ATGGAGTGTT 6180

ATCCATAGCT GCATCGTAAA CACCGTTAAT CAAGTGAGTC GCACCTGGAC CACCTGAACC 6240

AACTGCAACC CCGATTGAGC CGCCGAATTT AGCTTGCATA ACCGCTGCAA GAGCACCTGT 6300

CTCTTCGTGG CGAACTTGTA AGAAACGGAT ATCTTTGTCT TCAGCCAAAG CGTCCATCAA 6360

TGAGCTGAGT GTTCCTGATG GGATACCGTA GATTGTATCT ACGCCCCATG TTTTCAATAC 6420

GTTAAGCATT GCTGCAGATG CAGTAATTTT CCCTTGAGTC ATAATGATAA CTCTCCTTCA 6480

ATTTTTTTAA ACTTGGAGAA TACGATTACA TAGAATTGGA AACGTTCTCC AAATTTTTAC 6540

TATTCCACTG TATCATATTT ATGCTGACTT TTCTAAAAAT CTGCTCAAAA CTCTCTATTC 6600

TCTATTCTAA TACAGTTTTG AAAGTTCTGT CATTTCTGTT TTATAACAAA GAAATCTAGT 6660

CATTACTTTT AGTCTATTTT ACTAAAATTT AACAGAAGGG AACTGGTCAG AACAGATACA 6720

GAACTAAAGG CCATGGCTAG ACCTGCCAAT TCTGGGTTGA GAGCCAGTCC AACACCTGAA 6780

AAGACTCCTG CTGCAATCGG AATTCCGACA ACATTGTAGA TAAAAGCCCA GAAAAGATTG 6840

AGTAGAATTC GATGAAAGGT TTTCTTACTC ATATCAAAGG CACGAACCAC TCCTAAAAGA 6900

TTATTGGTTG TCAACACCAA ATCTGCTGAC TCGATGGCGA TATCTGTTCC AGCTCCCATA 6960

GCAATCCCCA CATCTGCTAC ACTAAGGGCA GGAGCGTCAT TGATACCGTC CCCAACAAAG 7020

GCTACTTTCC CTGACTGTTG CAGTTTATGG ATTTCATGGG CTTTTTCTTC TGGCAAGACG 7080

CCTGCAATGA CCTCTTCAAT TCCGATTTGA TCTGCAATAG CACGCGCCAC ACCAGCATTG 7140

TCTCCTGTCA GCATGACTGT TCGGAGACCA CGTTTTTTTA GCTGACTGAT GGCTAGCTTA 7200

GCATTTTCCT TAGGAATATC TTGCAAAGCA AGCAAGCCTT TGATTTCATT GTCAACAGCT 7260

AAGAACACAA CTGTCTTAGC TTCTTTTTCT AGTTCTTCTA GTTTATCTTG ATAAGTATTA 7320

GAAATATCCA TGCCATCCAG CATTTTAGCA TTTCCAAGTA AAACTTGTTT TCCATTGATT 7380

CGCCCTGAAA CACCTTTCCC GTGCAAGGAC TGAAAATTTT CAACAGTTTG AAACTCAAGT 7440

CCAGCTTCAC TCGCTCGCTT AACGATAGCC TCAGCCAGTG GGTGTTGAGA AGCATCTTCC 7500

AAGGAGGCTG CCAACCCAAA CACTTCTACT TCGTCGCCGA TGACATCTGT TACCACAGGT 7560

TTCCCTTCCG TCAAAGTCCC GGTCTTATCA AAGACAAGGG TTTGAACTTT CTGGATTTCC 7620

TGTAAGACAG TTCCATTTTT GAGGAGAACC CCCATCTTGG CACTACGTCC TGTCCCCACC 7680

ATAAGGGCTG TCGGTGTTGC AAGTCCCAAG GCACAAGGAC AGGCGATAAT CAAAACCGCC 7740

ACTCCGTAGA GAAGAGAGGA CACAAAGCTA GCTCCAAGCA CAACCACACT ATCCCTGAGC 7800

AAGACGAACC AAACCCAAAA GGTCATGATT CCTAAAATGA CAACTACTGG GACAAAAATC 7860

CCTGAAATCT TATCCGTCAA GTCCTGAATC GGCGCACGAC TTGTCTGAGC TTTCTTCACA 7920

AAATCCACAA TCTGAGCCAA AACAGTCTCT GAGCCAACTT TTTCTGCTCT AAAGACAAGC 7980

GTTCCACTAT GATTGATGGT TGAGCCAATG ACAGTATCTC CAACTGTCTT GTCCACAGGC 8040

AGACTCTCAC CTGTCACCAT GGATTCGTCA ATACTAGAGA CACCTTCTAC TACGACACCA 8100

TCAACAGCAA TCTTTTCACC GGGACGCACT CGAATCAGGT CGCCTACCTT GACTTGTTCC 8160

AAAGGAACTT GGACATAACT ATCATCACTC AAGACTTCTG CGGTTTTAGC TTGCAAGTCC 8220

AGTAATTTCT CCACAGCTTG GGACGTATTT TTTCTCATTT TTTCCTCAAA AACTGCTCCC 8280

AAAAGAACGA AAAAGAGGAT AAATCCAGCA CTTTCGAAGT AAACAGGGAG ACCAGCAAAG 8340

AGAGCAACTA GGCTATAGAA ATAAGCCACT AGAGTTCCCA GCGCAACCAA GGTATCCATG 8400

TTGGCATTGT GCTTTTTAAA ACTGGCCCAA GCACTCTGGA TATATGGCTT ACCTGCAACT 8460

AACATAATAG GCGTTGTTGC TAGAAAGGTT CCCCAATGCA TGACTTGATG ACTAATGCTA 8520

CCTGTCAACA TCCCAATCAT GAGAATCACA AGAGGCACAG TAAAGATACT AGTAATCCAA 8580

AAACGTTGCA GGAGAGATAG AGATTTTCGA GTCTTCTCAA CGACTGTATA GCTTCCCTTT 8640

TGCATCTTCA TGCCACAAGA AAATTCATGT CGCCCTAATT CTTGAGGCGT AAAACGAATG 8700

ACTTTCTCCT CATCTACGCC GATTGGTTCC AAGATACCTT CTTCTTCAAA CAGAATTTCC 8760

TTATAACAGT TTGAAGGAGT AGCACGATGA AAGGTAATCT CAGCTGGAAT TCCCTTTTGA 8820

AGCTGGATAT GGGCTGGATG ATAGCCTTTT TCAGCTCGGA TACGGATTTT TTGAATGCCA 8880

TTTTCTAAGC TTGCTTTCAC AATTTCTGTC ATAGTCTCCA CCTACTCTAC AATCATCTTG 8940

CCGTGCATCA TGTTCATACC ACAAGCAAAG CCAAACTCTC CAGCCTGTTC AGGCGTGATT 9000

TCCACTACAT ACTCTTCCCC CATTGGCAGG TTCGCATGTA CACCAAAATC TGGAAAAACA 9060

ATTTGATCCA GACATGGTGA AGGATCCTTG CGGTCAAAGA CAATGCGTGC TGGCACTGAT 9120

TTCTTGAGGA CAATCAACTC AGGAGTATAG CCTCCCATGA CTTCCACTCG AATCTCTTGG 9180

TATCCGTTTT TTTGCTGGGC TTTTTGTCCA GATTTTTCAG GCTTTTTGAA AAACCAAAAC 9240

AAGATAAACG CGATAAGGGC AATACAAATA ATGGTTACAA TACTATTTAA CATGACGTCT 9300

CCTTTACATA CAATTACATC TTACTTCTGT TACAGCACTT GATTTCTTCT CTGAAATCAC 9360

AGCTTCCAAG TCTTCCAAGT CAGTCTGAGT AAATTCACAT TCTACAATCA AGTCAGCCAA 9420

CAAATTCCTA ATCCTACGGG AACAAACCTT GTCTTTGATA TCTTGGACAA GTAAATCCCG 9480

ACTTTGGTCT AGAGTTAAAA GGGCTGAATA AACAAAGGAC TTGCCTTCTT TTTTCCGAGT 9540

CAAACACTCT TTATCAACCA GACGAGCCAA AAGTGTCTGA ACCGTGGACT TGGACCAGTC 9600

AAACCGCTCT GCCAAAACCC TAATCAAATC TGTACTGGTC TGCTCCCCCT GCATCCAAAT 9660

AATCTTCATG ACCTGCCATT CTGCATCTGA AATCTGCATT ACCATACCTC CAAAATCTAC 9720

ATTTGTCAAT TACACTCATC AGTATACTCT TAAAATCTAC ATTTGTCAAT TATAGAAATA 9780

ATATTTTCTT CGAAAAATAG AATTTTAATC ATTTGAAAAA CGATTTGCAG TCAAATATTA 9840

CTATATAAAC AATAAAAATA TGCTATACTA AAGAAAAAAG AAAACAACCA CTAGGGGTGC 9900

GTAAAGCTGA GATTAACGAC TGTTAGATCC CTCTGACTCA ATCTAGGTAA TGCTAGCTGA 9960

TGGAAGTGGA AATGATAATG GGGACTAGCA GTCTTCTATT GCCTTTCTAA AACAGACTAG 10020

CTTGTTCTTA AGAATACAAA CTTCAGTTGG TTGGGAGGTT TTAGATGACT TATTTACCCG 10080

TTGCTTTGAC CATTGCAGGG ACTGACCCTA GTGGTGGTGC TGGCATTATG GCAGATTTAA 10140

AGTCATTCCA AGCGAGAGAT GTCTATGGAA TGGCTGTTGT AACCAGTCTT GTCGCTCAAA 10200

ATACCAGAGG TGTTCAGCTA ATCGAGCACG TTTCTCCTCA AATGTTGAAA GCCCAATTGG 10260

AGAGTGTCTT TTCTGATATT CCACCTCAGG CTGTAAAAAC TGGAATGTTG GCTACTACTG 10320

AAATCATGGA AATCATCCAA CCCTATCTTA AAAAACTGGA TTGTCCCTAT GTCCTTGATC 10380

CTGTTATGGT TGCTACAAGT GGAGATGCCT TGATTGACTC AAATGCTAGA GACTATCTCA 10440

AAACAAACTT ACTACCTCTA GCAACTATTA TTACGCCAAA TCTTCCTGAA GCAGAAGAGA 10500

TTGTTGGTTT TTCAATCCAT GACCCCGAAG ACATGCAGCG TGCTGGTCGC CTGATTTTAA 10560

AAGAATTTGG TCCTCAGTCT GTGGTTATCA AAGGCGGACA TCTCAAAGGT GGTGCTAAAG 10620

ATTTCCTCTT TACCAAGAAT GAACAATTTG TCTGGGAAAG CCCACGAATT CAAACCTGTC 10680

ACACCCATGG TACTGGATGT ACCTTTGCTG CAGTGATTAC TGCTGAACTA GCCAAGGGCA 10740

AGAGTCTTTA CCAGGCAGTT GATAAGGCCA AGGCCTTTAT CACAAAAGCT ATTCAAGATG 10800

CCCCTCAACT CGGTCATGGT TCTGGTCCAG TCAACCATAC AACTTTTAAA GATTAAGAAA 10860

AAAAACTCTC TAGTTCCCAC TTTAAGGGAA TTAGAGAGTT TTTATACTCT TCGAAAATCT 10920

CTTCAAACTA CGTCAGCTTC CATCTGCAGC CTCAAAACAC TGTTTTGAGC TGACTTCGTC 10980

AGTCTTATCT AAAACCTCAA GGCAGTACTT TGAGCAACCT GCGACTAGCT TTCTAGTTTA 11040

CTCTTTGATT TTCATTGAGT ATTAATTAGG AAAGAATGTT ATGCAACTTT TTTAAAAAGG 11100

CTTGCGTTTT TGCCTCAATA TCTTCTGCTT GCATCAAATC ACGTACAACA GCTACACCAG 11160

CTATGCCAGT GCCCATAAGC TGATCAATAT TCTCCGAAGT CAAGCCTCCA ATAGCAACTA 11220

CTGGAATGGC AACCGTTTGG CAAATTGTTT TCAAGGTCGA TATCAGAGTA ATGGGCGCAT 11280

TTTCCTTGGT GGTGGTTGGG AAAATGGCTC CTGTACCCAA GTAATCTGCA CCTGATTTCT 11340

CCGCTTCCAG AGCTCTTTTA ACCGTTTTAG CGGTGACACC GAGGATTTTT TCAGGACCCA 11400

AGACTTTGCG AGCTACCGAA ACTGGTAATT CATCATCTCC GATATGCAGA CCTGCTGCAT 11460

CAACCGCAAG ACAAACATCC AACCGATCAT CGATTATCAA GGGTACCTGA TAAGCATCTG 11520

TTATTTCCTT GACTTGTTTT GCCAGTTGAT AATATTGATT GGTTGTGAGA TTTTTTTCTC 11580

GCAATTGGAC TATGGTAACC CCTGAACGGC AGGCCGTCTC AACTTTTGCA AGAAAGCTTT 11640

CCACGGAATC TTGATAGCGA TTGGTTACCA GATATAGTCT AAGTGCTTCT CTATTCATAA 11700

ACCTCTCCTT TGATGGTATC TAGCCAATTT TCATCTCTTC TTAGGAGCGA AAGCTGATTG 11760

AGTACTTGGT AACGAAATTC TTCCAATCCC ATTCCTTGAA CAACTATTTT CTCAGCAGCG 11820

ATATTGAGAT AAGAGACTGC TAAGCAAGAA GCTTCAAAAC CAGTCTTTCC TTGGCTGAGA 11880

AAAACAGCTG TTAAGGCTCC AACCAAGTCT CCTGTCCCTG TTATCCAGTC TAATTCAGTA 11940

CAGCCATTTC CCAGTACAGC GACCTGATTT TTCGAAACGA CGAGGTCCTT GGGACCTGTG 12000

ACTAAGAAAG ACATACCAGG ATAGGTCTGA CACCAGTCTT TCAAGACTTG AAGCAAATCC 12060

TCCGTTTCTT GATCTTTAGC ACTCGCATCG ACCCCAACGC CGTGGTGCTT TAATCCAACA 12120

AGACTTCGAA TTTCTGACAT GTTTCCTTTA AGGACCGTAG GTCTATAGTC TAAAAGGTCT 12180

TTAACTAAGC TCTTACGAAT GGATGAAGTC GTTACGCCAA CCGCATCTAC TACCATCGGG 12240

AGAGAAGATT GGTTTGCATA CGAAGCTGCC ATGCGGATTG CTTTTTCCTT CTCAGCTGAC 12300

AAATGCCCCA AATTGATGAA GAGAGCCTGA CTTTGCTTAG TAAAATCAAG AACTTCACGG 12360

GAATCATCTG CCATGACAGG TTTGCATCCC AGAGCCAAAA TCCCATTTGC CAGCATCTCA 12420

CAAGAAATCT CATTGGTAAT GCAGTGAATG AGGGAACTAG AGCCTATAGG AAAGGGATTT 12480

GTAAATTCCT GCATCAGTCT ATCCTTTCAC TAAAGAAATA TCCCTGCACT TTTTTAAAGA 12540

ATTCCTGCTT GATTAAAAAT CGAAAGGCAA TAAAGGAAAT CGCTGTACCA ATCAAGGTTG 12600

CTCCGAAAAA TCGAGGCGTG TAGATAAACC AGCTAAGCTT AGCAGCTGAT CCTGTAAAGA 12660

GTACCATAAC AGGATAGGAA ACAATGGAAC CAATAATACC TGTTCCCAAA ATCTCTCCTA 12720

GAGCAGAATA GTGAAATTTT CGACCGTACT TATAAAAGAG ACCTGCTAGA AGGGCTCCAA 12780

AAGTCGCTCC TGTGAGAGCT AAAGGCGGAA TCCCTTGAGT CGTCATACGG ATAAAGGCTG 12840

TGACTGTAGC CATAGCCAAG GCATAAACAG GTCCCATCAT GATTCCTGCT AGAATATTGA 12900

CTACACTGGA CATCGGTGCC ATTCCCTCAA TTCGAAAGAT AGGTGTAAGG ACTACATCAA 12960

GGGCAATCAT CATAGATAAA ATGGTTAATT TGTGAACTTG TAATTGGTGC TTTCTCATGC 13020

TTCTATTCTT CTCCTTTTTC TAAAGACTGT AAATCGCTCT TCCATGTCTG GTGTTGGTAG 13080

GCCATTTCCC AAAACTTGGC TTCCATATGA ACACTGATGT GGAAGGCATC TAGCATTTTT 13140

TGCTTGTCTG TCTCGTCACT TTCTCGATAG AGCTGATTGA CCAGTGCTCC CTCCTCTCTG 13200

ATCTGTTGCT CTAACTCATC CGTAATATAA GTTTCAATCC ATTGTTGATA GAGAGGATTT 13260

GGTGATGGTT TAAGATTAAG TGATTTGCCT ATATCATGGT ATAACCAAGG ACAAGGAAGC 13320

AAGCTTGCAA AAGCGATGGC TAAGTTCGGT TCTGCAAATT GCCTATAAAT ATGAGAAATG 13380

TAATGATAAC AGGTTGGAGC GATTGGATGT TGCTCCATTT CCTGGTCGCT GATTTCCAAT 13440

TCCTTGAAAA ATTGTTGGCG AATAAATAAC TCACCCTCCA CTAAACCCTG AGCATTTTGT 13500

TTCAAGAGTC TTTTCATCTC TTGGTTTGAA GTCTTATCAG CCAAAAGATG ATAGATTTCT 13560

GAGAAAGCCT TCAGATAGTA GGCATCCTGA ATCAGGTAAT AGCGGAAAAT GGCAGGTTCT 13620

AAATTCCCCT CTTGTAATTG TAAAATAAAG GGATGATGAA AGGAAGCCTG CCAAGCTTTC 13680

TTGGATAATT CCATCGCAAT ATCTGTAAAT TCCATAATAA CTCCTTTATA AAAATAGACT 13740

GGTTTGAAGC AATAAAAAGA AAAGCAGGTA GATTAATTTT GTTTTTTTAG GAATATAAAA 13800

AGTCCGATAG CTATTCTTCA ACTGTGCATG TTCGTCATAT CCGTGAGCAG ATAGAGCTCT 13860

CAGGTAAAGA TGGCGCCACC TAAAGACTGT CATCAGAACC TTACTGTAAA TCAAGGGCGA 13920

CCAAAAATGT AGTTCTTGAC CACGTAATAG GCAAGCTTCT TTGAGGGACT TGATTTCTTG 13980

CTGAATGAGA GGAAAAGAAT TGAATACCAC AATCAAGGCA TAGGACCAAG AGCGTGATAG 14040

CCCCTTTTGA GCCAAGTACA AGAGAAGCTC TTTTAGTGAA ACAGAGGAAA CAAAGACAAG 14100

GCCGATACAA ACTGTCACAA AGGCCCTCGT TCCAAGCATG ACTGCCTGTG AAGCATCTCC 14160

GTGTAACTGA ACTGCCCAGT AGTTGGCAAA AGATGGTAAA ATGGCAAGTA TGATCATCCA 14220

AGCTAACATT TTAAATCGAC GGTAATAGAG CATAAAGAGA ATACAAAATG CGACTACCGA 14280

AAGAGTCAGA GCAATCGAAG GAATGAAAGA TGTTTCCAAG GATAAAATCA GCAAGAAGAG 14340

ACTGATAATC GGTGTCTGGG TTGCTACTTT GACCATACTA TCTCACCTCC CCTTGGGTAT 14400

TGCTACTCTG AGATGTAAGT GGTTTGGTAA TGGTCACTTC TTTCACATGC CGAAGACCCT 14460

GACTAGTCAT CTCAATCCAA TAATCAACCA CAGAAATCAA AGGGTCTAAA CGATGACTAA 14520

TGAGCAGAAA ACTTCTTCCT TGATTCCTCT CCTCCACAAT CCACTTGCAA AAATAATGGC 14580

AGGCTCTATC ATCCAAACCT GCAAAAGGTT CATCTAGCAA GATCACGGAA GCCTTACTGG 14640

TCAAGATGGT CAGGAGCTGA AGAATTTTTT GCTGACCACC ACTTAATTGA TAGGGACTCT 14700

TATCGACTGC CTGCTCCAAA TCAAAATATC GTAAAGCTTG AAAAATCCGC TGATTTCTTT 14760

CAGAATCAGG TCCATCTAAT TGAAGCTCCT CTCGCAGACT GACTCGGATA AACTGCTTCT 14820

CAGCTTCCTG AACAACACCA GTCAGATCAC GATACAAACT CTTTTTCTTT TTCAGGACCG 14880

AACCCTTCCA AGTAATGCTC CCCTTATACT TTTGAAATTG AAGAATAGAC CGAAAGAGGG 14940

TTGATTTCCC GACACCATTG TCACCCAGGA TACAGGAAAT CCCTTGATAG AATGTGAAAT 15000

CAGCAATTGA AAAGAGGGGG CGATTACCAA GCTCACCAGT CACACGGTTC ATATGGAATA 15060

GTTCCGGGCT AGAAGCAACT TCCTTTGAAG CAACCTGTGT CATCTCATAG GAAGGGATTT 15120

GAAACACTTC CCTTAGTTTT CCGTCTCTTA GCTCCACCAT ATGGTCGATA TAGGCTTTAT 15180

AGTCAGATAA ATCATGGTCG CACAAAATAA CTGTCTTCCC ATCATAGACC AACTCTTTTA 15240

GAATCTCCAA TATCTCGATT CTGCTCTTGC GGTCAATGGA AGCGAAGGGC TCATCCAAGA 15300

GATAGACCCT AGGATTCATG GCAAAGAGGA CAGCCAGCGC TGCTTTTTGC TTTTCCCCAC 15360

CTGATAAGTG ATGGATGAGA CGGTGCAAGA TGTCCTTGCA ACGACATTGC TGGACAACCT 15420

CTGCTATTTT AGAATCAATT TCCTGAAGGT GATAGCCGAT ATTTTCCATG GTAAAAACCA 15480

ACTCCTCAAA CAAGCTCTCC ATGGTAAATT GATGATTAGG ATTTTGCAAG AGAATACCAA 15540

CCGTCTGGAC ACGTTCGACG ATAGAAAGCT GACTGACCTC GCTCCCATCT ATCAGGACTT 15600

GACCGCTATA GGGAAGAGAA CTAACTTGGG CAATCATTTG AAAGAGGCTG GATTTTCCAG 15660

ACCCACTACT CCCAACTAAC AAGGTAAAGG CTTGCGCATG AAAAGTAAAA TCAAACGGCT 15720

CAGAGAAGAT TGGGGACTGA ATCGCTCGTA GTTCCAGACC CATCTATGCT TTTCCTCCAG 15780

TTGCAAACTG ATGATAGAGT TTGACAATGG CACGAACCAA GATGGTACAG AAGAAATAAA 15840

CAGAAATAAA ACGTACCACA AGCAAGGAAA GGACAAACGG AAGGGAAAAG GCGTAGTAAC 15900

CTAACTTAAT GTATTCATAG ACAAAGCTAA CAAGCGTAAT CCCAATACTA TTAGCAGTTA 15960

GAGAGAGCCA ACTTTCATAG CGATTCTTAG TTACGATAAA ACCAAATTCA CTTCCCAAAC 16020

CTTGAACAAA GCCAGACAAA AGAGCTCCTA GACCAAATTG GCTACCATAA AGGACTTCAG 16080

CAAGCGCAGC TAGCACTTCT CCAATCGTTG CACTTCCGAC TCTCGGAACA AAGATGGCAG 16140

CAATGGGCGC AGCCATACAC CAGAGACCGA AGAGGATTTC ATTGGCAAAG GCCTGCAAAC 16200

CAAGAGGTGT TAAGAGTAGA CTGAGAATAT TATACACATA TCCTGAACCA ACGAAAACCC 16260

CACCAAAAAA GATAGACAAG AAAGCAAGCA AGATAACATC TTTTAACTGC CATTTTTTCA 16320

ACATAAAAAA CTCCTTTTTT TAAAGAAAAG TGAGGCACTC AAGAAGACCG ACCTAAATAC 16380

TTTGTATAGC AGACTGAATT TAGAACAGTA CACAAGAACA CTAAAATATT TCTAGAAATT 16440

AATTTGAATT TTCTAATTGA TTTGTTCGCA TCTTATTTCA ATCTACTATA TCATCTTCAT 16500

CCAGTTTCGT AAAAGAAAAA ACTCTAATTA CAGATACAAA TTAGAGTTCA GCTTACAAGA 16560

TTAGACAGTT CTTTTCGACA TACGAAAAAA ACATTTCACA TTTCCCTTCG CCAGTCTTAA 16620

CTGTATCAGG TTCAATGGGT ATCATCTCAG CCTAAAGCAC CCCAAATGTC TTTATTATTT 16680

AATTATGTGA TTATTATAAC ACACATTTTA TACTAGTTCA AGAAATTGAA CTGGAAATAC 16740

AGCCTTGCAC TCACAAAGAC AGCAGATCTT TCTTTTGCAA AAAACAAATG ACCTGTTTGA 16800

TGAATTAGCC ATTCAAGCTG AATCTGGACA TAGCTTTTTA AAAAAGGAAA ATCCTACTTA 16860

CTTAGAATCC AAGGATAGAT ATCTATTGTT CACTCATTTC CCGAACAGTT TTTTCTATAT 16920

TTTTTGCATA CGATATTGCC GAAATGATTG AAACGCCATC CATATTGGTC TTTATAATGT 16980

CTTTAATATG TTTCGTCTGT ATCCCACCAA TTGCAACTAA AGGCATTTGT GGCAATAGTT 17040

TTCTCATCAA TTCAAGACCT TCATAACCTA TAGTACCACC AGCATCATCC TTTGACTGGG 17100

TACCAAATAC AGGCCCAACA CCTACATAAT CTACATATTC AACTTTTGAT TGTTGAAATT 17160

CTTCTTCGTT TCTTATAGAA AGACCAATTA TTTTATCTGG CATCAATTTT CTAATTTCAT 17220

CAACACCAAT ATCATCTTGA CCTACATGTA CGCCATCGGC GTCAATTTCC ATTGCTAAAT 17280

CTATATCGTC ATTAACGATA AATGGAACAT TGTATTTTTT ACAAAGTTCT TTAATTTGGA 17340

TAGCTAGCTC AAGTTTTTCT AAGCCTTCTA AAGCACCCTC ACCTTTTTCT CGAAATTGAA 17400

ATAAGGTTAT ACCACCTTTT AAGGCTTCCT CAACGACTGT ATATAGATTT TTTCCTTGGC 17460

AAGTAGTCGT TCCACAAATA AAATATAGTT TTAGTAATTC TTTATGAAAC ATCTTACTTC 17520

ACTCTTTTGA ATTCCTTTAC ATCTTCATCT GTAATCTCGT ATAAGGCATT TATAAATTCA 17580

ACTTTAAATG TCCCAGGAAG ATGTCCATTT GGACGTTTTT CTGCTATTTC TCCAGCGATA 17640

TTGTAAACCA ACACTGCTGT TTTTAATGAT TTCAATTCTT GACCTTTTTC TAGTCCGATA 17700

AAGCTTGCTA CTACAGCTCC TAATAAGCAT CCTGTCCCAA TGACTTTCGG CATCATAGCA 17760

CTACCATTAT GAATCATTAC CACTTCTCCA TTAACAGCAA TGGCATCCAC TTCACCTGTT 17820

ACTACTATTG GAATATTGAA CTTCTCATTT GCTGCTAGAG CAATTTCGTC AATATTATCT 17880

ACGCCCGCAC TATCTACTCC TTTAGATGCC ACATCTATTC CTACTAAAGA GGCAATCTCG 17940

CCAGCATTTC CTCTAATCGC TGCTAGTTTA TAATTGTTGA TTAGATCATC TGCTACTTTT 18000

TTTCTATATT CTCCTGCTCC ACAGGCTACA GGATCTAAAA CTGCTGGGAC ATTATATTTC 18060

TCTGCAATTT TCAGAGCAGC TTGGTATAAT TTCCAATTTT CATCTGTCAA TGTTCCTATG 18120

TTTATTAATA AACCACCAGC ATACTTTAAC AAATCCTCTA AATCTGCTGG AAACTCACTC 18180

ATGGCTGGTG AGGCGCCCAG TGCTACTAAT CCATTTGCTG TGAAATTTTT TACTACATCA 18240

TTGGTTATAC AAATGACCAA TGGTGCTTTT TCTTTTAATA ATTTTAAACT TGTCATATTG 18300

AAATCCTTCC TTTTCACTTT ATACGATCTA CTAATTTCGA TTTATCTTTA GTTGAGAATT 18360

TTTTTCATTT ACATTGAATG ATTTATACTC AATGAAAATC AAAGAGCAAA CTAGGAGGCT 18420

AACCGCAGGT TGCTCAAAAC ACTGTTTTGA GGTTGTGGAT AGAACTGACG TGGTTTGAAG 18480

AGATTTTCGA AGAGTCTTAC CTCATCAAAT TTGTAAATAT CATGAGCCTT CTCTAGACAT 18540

CGTAACCAAT ATCAAAAAAA GCTAATTCTA AAGCGACTGC TTGATTCCAG CGTTGCTGAA 18600

GTTCTGTCAA ATCTTCTCGA TTTTTACCGA CACGATTGAG TTCGTCAACC AGAAATTGAA 18660

CCCACTCTGC AAAGAAAGGA CCTCTGTGGA GATTGATCCA TTCCGAATGA ATATAGACTT 18720

CAGGTAAAGC CAAATCTTTA GAACCCCAGT CTAAATAGAG ACCTTCTGCA ATGACCAGCA 18780

TGACCAAAAG ATGGGCATAG TCTGATGAAG CCACCGCCGA ATACATTAGA TCCTGAAAGG 18840

CTTTTGTTAC AGGGTGCAAA GTCACTTCTA GATAGTCATT CTCTGCTACT TTTAACTCTT 18900

TAAAAGCCTT TTGGAAATAA CCATCTTCAT CTGCTTCAAG AAAGCCTAGT TGCTTGGCAA 18960

AACGAAGCTT GGATTCAAGT TTATCTGCGT GACTACGCAG GCACCCAGCA TGGATAAGAA 19020

GGCATCAAAG AAGTGATAAT CTTGAATCAG ATAGTCCTTT AAGACCTTAT TCTCAATTGT 19080

CCCCGCAAAA AGTTCCTTAA CAAAACGATG ATTGATTGCA GCCTGCCAAT CCTTCTGACT 19140

GCTTTTTAAT AATTCTCCAA CAGTCAAACC TGGCTGAAAT GCATAGTCTT GTGTTTCCAT 19200

ATTTACTTCT CCTCTCTTTA CTTGTTAGTA ATTAATAAAA CACCAAGAAA TATCAAGCAA 19260

AATCGTAATT CCACTTGATC CTTTTAAAGC ACATCGAGAG CATTTGCAGA GAGCTAACTA 19320

AACAAGCCTA TCCAGTTTAT ATAAACAAAA AACTCCAATT ACAATCAAGA ATTAGAGTTG 19380

ACTTACAAGA TTAGACCGTT CATTTCACCA TACGAAAAAA CTGTTCACAT TTCCCTTCGC 19440

CAGTCTTAAC TGTATCAGGT TCAATGGGTA TTATCTCAGC CTAAAGCACC CCAAATGTCT 19500

CTATTATTTA ACTACTGAAC CAGTATAGCA AAAAATGAAA GCCCTAGCAA GATATTTGAC 19560

CGAAAAATAT CTTTATATAT AATATATTGA AACTAGAATA GTACACCTCT ACTTATAAAA 19620

CATTGTTAGA AATCGATTTG ACTGTCCTGA TTGATTTGTC CTATTCTTAT TTCATTTTAC 19680

TATAGTTTTC GATAGCAATT TATTCTTCCA ATACACGAAG AAAAACCTCC ACATTCAGTG 19740

GAGGCAATCT GTTTTATCAA TACAATTTTA AGTCACGAGG GTCAACTGGG AAGGTTGGGT 19800

TGTATGGATT GTGACGGAGC TTGAAGTGTT TGACATCTTC AATGGTCTGA GTTCCAGACA 19860

ATTGCATAAC TGTCTTCAAT TCCGCATTCA AGTGTTCAAA GACTTGACGC ACACCGACAC 19920

TACCACCGAG AGCCAAGCCA TAGATGACAG GGCGTCCAAT AGCAACCAAG TCTGCTCCTG 19980

ATGCCAAGGC TTTAAAGACG TGTTGACCAC GACGAACACC AGAGTCAAAG ACAATCGGCA 20040

CACGTCTATC AACTGCTTCT GCCACTTCTT GAAGCGAGTC AAAGGCAGCT GGTCCACCGT 20100

CGATTTGACG ACCACCGTGG TTGGTTACCC AGATACCAGA AGCTCCTGCA GCAAGCGAAC 20160

GTTCAACGTC CTCACGGCAT TGTGGTCCCT TGACATACAC AGGAAGACCA GAGTATTCAG 20220

CGATAAATTC TACATCGCGT GGAGACAAGC GTTGTTTAGC TGATTTGTAA ACAAAGTCCA 20280

TTGATTTACC AGCACCTTCT GGCAGGTATT CTTCAACAAT CGGCATGCCA ACTGGGAAGA 20340

CAAAACCATT ACGCTTATCC ACTTCACGAT TCCCCCCTAC AGTAGCATCT GCCGTCAAGA 20400

CAATCGCTTT ATAACCTTCA GCCTTCACAC GGTCCATGAT GTGGCGGTTG ATACCGTCAT 20460

CCTTACTAAA GTAAAATTGA AACCAATGAG GTGTCCCTTG GAGGGCTTCA GAAATCTCTG 20520

GAAGGTCAAC AGTAGAGTAA GAACTGGTTG TATAAAGAGA ACCAAACTCA TGCACACCAC 20580

GCGCAGTCGC CACTTCCCCC TGTTCATTTG CCAATTTATG AGCCGCAACA GGTGCCATAA 20640

TGATTGGAGA AGATAGTTTT TCACCTGCAA ATTCAATCTC TGTACTTGGA TTTTCTACAT 20700

TGCAAAGTGT ATGAGGAACG ATGAGCTTGT GGTTAAAGGC ACGGATATTC TCTCTTAAAG 20760

TGAAAGTATC TTCCGCCCCA CTAGCGATAT AGCCAAATGC TGCTTTAGGA ATAACTTGTT 20820

GCGCCATTGG CTCCAAATCA TAGGTATTGA TGAArTCTAC ATGACCTTCT GCATTGCTTG 20880

TTTTGTATGA CATAAAATGT CCTCCTTAAT AAGTAAGCGT TTACTTTGTG TATTACAAAA 20940

ATATCTTAAC TCTTTTTCAA AACTTTTAAA ATATTTTGTT TGGAAATTTC AGAAATTTTA 21000

TGTCTATGAT AAAAATCCTT ATAACGGCAA TAAAAAATAG ATATTATCCA AAGAAGATTT 21060

TAAGTGCTAC AATAACTGTA TTATTTCTAG ATGGGAGGTT CTATTTTTGG ATTGATCCAT 21120

TGTTGAACAA TATCTACCAC TATATCAAAA GGCATTCTTT CTGACCTTGC ATATTGCAGT 21180

TTGGGGAATT TTGGGATCCT TTCTGCTCGG TTTAATCGTT AGTATCATCC GACATTATCG 21240

AATCCTTGTT TTGGCGCAAG TAGCGACAGC CTACATTGAA TTGTCACGTA ATACGCCCCT 21300

TTTGATTCAA CTCTTCTTTC TCTACTTCGG TCTTCCCCGA ATCGGGATTG TCCTATCTTC 21360

AGAAGTCTGT GCAACGCTTG GGCTTGTCTT TTTAGGAGGC TCCTATATGG CAGAATCTTT 21420

CCGAAGTGGG CTGGAAGCCA TCAGTCAAAC CCAGCAGGAG ATTGGCCTCG CTATTGGTCT 21480

GACACCTCTA CAGGTCTTTT ACTATGTGGT TCTTCCGCAA GCAACAGCGG TGGCACTCCC 21540

CTCCTTTAGT GCCAATGTCA TTTTCCTTAT CAAGGAAACC TCTGTTTTCT CAGCAGTGGC 21600

TTTGGCCGAC CTCATGTACG TCGCCAAGGA TTTGATTGGT CTCTACTATG AGACAGACAT 21660

TGCGCTAGCT ATGTTGGTAG TTGCTTATCT AATCATGCTG CTACCCATCT CACTGGTCTT 21720

TAGCTGGATA GAAAGGAGGC TCCGCCATGC AGGATTCGGG AATCCAAGTA CTCTTTCAAG 21780

GAAATAATCT CCTGAGAATC TTACAGGGAT TGGGCGTTAC GATTGGGATA TCCATCCTGT 21840

CTGTCCTCTT ATCCATGATG TTCAGAACAG TCATGGGAAT CATCATGACC TCCCATTCTA 21900

GAATCATACG ATTTTTAACA CGATTGTATC TGGAATTTAT CCGTATCATG CCCCAGCTGG 21960

TGCTACTCTT CATCGTTTAC TTTGGCTTGG CTCGAAACTT TAATATCAAT ATCTCAGGTG 22020

AGACTTCAGC TATTATCGTT TTTACCCTCT GGGGAACAGC TGAAATGGGA GACTTGGTAC 22080

GTGGAGCTAT CACTTCTCTC CCTAAACATC AGTTTGAAAG TGGACAGGCA CTCGGCTTGA 22140

CTAATGTTCA ACTTTACTAC CACATCATCA TCCCACAAGT CTTAAGAAGA CTGCTACCGC 22200

AGGCTATCAA TCTTGTCACT CGGATGATTA AAACCACTTC ATTAGTTGTT TTGATTGGGG 22260

TTGTGGAAGT GACCAAAGTT GGACAACAAA TCATCGATAG CAATCGCCTG ACCATCCCAA 22320

CTGCTTCATT TTGGATTTAT GGAACCATTC TAATCTTATA TTTCGCAGTT TGCTACCCTA 22380

TTTCCAAACT ATCCACTCAC TTAGAAAAAC ATTGGAGAAA CTAAATGTCT GAAACTATCT 22440

TAGAAATCAA GGAACTAAAA AAATCCTTCG GAGACAATCC CATCCTCCAA GGACTTTCTC 22500

TAGAAATCAA AAAAGGGGAA GTTGTTGTCA TCCTAGGGCC ATCTGGTTGT GGGAAAAGTA 22560

CCCTCCTTCG TTGCCTCAAC GGCTTAGAAA GTATTCAAGG TGGAGATATT CTTCTGGATG 22620

GTCAGTCTAT CGTTGAAAAT AAAAAAGATT TTCACCTAGT TCGCCAAAAG ATTGGCATGG 22680

TCTTTCAAAG TTATGAACTC TTTCCCCATC TGGATGTCTT ACAAAACCTC ATCCTAGGCC 22740

CTATCAAAGC TCAAGGAAGG GACAAGAAAG AAGTAACGGA AGAAGCTTTG CAATTACTAG 22800

AGCGTGTCGG TTTGCTGGAT AAACAACATA GCTTTGCCCG TCAATTATCT GGTGGACAGA 22860

AGCAACGTGT TGCAATTGTC CGTGCCCTCC TAATGCATCC AGAAATCATC CTTTTTGACG 22920

AGGTGACTGC TTCGCTGGAT CCAGAAATGG TGCGTGAGGT GCTGGAACTT ATCAATGATT 22980

TGGCCCAAGA AGGCCGTACC ATGATTTTAG TAACCCACGA AATGCAGTTT GCCCAAGCCA 23040

TTACTGACCG GATTATCTTC CTCGACCAAG GGAAAATCGC TGAAGAAGGA ACAGCTCAAG 23100

CCTTCTTTAC CAATCCGCAA ACCAAACGAG CCCAGGAATT TTTAAACGTC TTTGACTTTA 23160

GCCAATTCGG CTCATATCTA TAAAGGAGAT TCTTATGAAA CTATTCAAAC CACTCTTAAC 23220

TGTTTTAGCA CTTGCCTTTG CCCTTATCTT TATCACTGCT TGTAGCTCAG GTGGAAACGC 23280

TGGTTCATCC TCTGGAAAAA CAACTGCCAA AGCTCGCACT ATCGATGAAA TCAAAAAAAG 23340

CGGTGAACTG CGAATCGCCG TGTTTGGAGA TAAAAAACCG TTTGGCTACG TTGACAATGA 23400

TGGTTCTTAC CAAGGCTACG CTACGATATT GAACTAGGGA ACCAACTAGC TCAAGACCTT 23460

GGTGTCAAGG TTAAATACAT TTCAGTCGAT GCTGCCAACC GTGCGGAATA CTTGATTTCA 23520

AACAAGGTAG ATATTACTCT TGCTAACTTT ACAGTAACTG ACGAACGTAA GAAACAAGTT 23580

GATTTTGCCC TTCCATATAT GAAAGTTTCT CTGGGTGTCG TATCACCTAA GACTGGTCTC 23640

ATTACAGACG TCAAACAACT TGAAGGTAAA ACCTTAATTG TCACAAAAGG AACGACTGCT 23700

GAGACTTATT TTGAAAAGAA TCATCCAGAA ATCAAACTCC AAAAATACGA CCAATACAGT 23760

GACTCTTACC AAGCTCTTCT TGACGGACGT GGAGATGCCT TTTCAACTGA CAATACGGAA 23820

GTTCTAGCTT GGGCGCTTGA AAATAAAGGA TTTGAAGTAG GAATTACTTC CCTCGGTGAT 23880

CCCGATACCA TTGCGGCAGC AGTTCAAAAA GGCAACCAAG AATTGCTAGA CTTCATCAAT 23940

AAAGATATTG AAAAATTAGG CAAGGAAAAC TTCTTCCACA AGGCCTATGA AAAGACACTT 24000

CACCCAACCT ACGGTGACGC TGCTAAAGCA GATGACCTGG TTGTTGAAGG TGGAAAAGTT 24060

GATTAGTCAT TAACTCTTAA AAGGAACTGG ATTTTAAGCT CCAATCCCTT TTTAAGATTT 24120

TACCTATAAC ATCCTGAGTC TATCTAAGAT GTTCAATCTG AACACAGTGT ACATACTTTA 24180

TCTTCTATTG CATATACTTT ATCACATAAG ATACGAATAT CCTCTTCACT ATGACTAGCA 24240

ATCAAAATTG TTGTCCCTTT TTCACTAGAG AGCTTTCTAA ACAATGTTCT CATATTTTCT 24300

ACACTTGATT TATCCAAGGC ATTCATAGGT TCATCTAGTA AAAGAATAGA GGGATTCTCC 24360

ATAATTGCTT GAGCAATCCC TAGCTTTTTC CTCATACCTA GCGAATAAGT TTTAACTTTC 24420

TGGTCTTTTT GCTCATATAG ACCAACTATT TTCAGTGTAT CATTGATTTC CTGATTACCA 24480

ACTACTCCTC GTATGCTTGC CAAATATTGT AAATTCTTAA AGCCACTATA ATAATTTATA 24540

AAACCAGGTT CTTCAATCAA AGCTCCCAAA TTAGCTGGAA TTTTTCTCTC AGGAACAATA 24600

TTTTCCCCAT TGATTAACAC TTCTCCATAA GACGGACTAT ATAAACCAGC TATTAATTTA 24660

AACAATACAC TTTTCCCTGA GCCATTCGCA CCAGTAATTC CTATAATTTC CCCCTGTTTA 24720

CAACTAAAGT TAAGGTTTTG AAAAACACAT GTCTTTTTTA ATTTCAACTC AATATTTTTT 24780

AATGTAATTA TTTCATTCAT TCTATAAACC TCCTCTTTTG ACGAGTGAAA TAGAAAATGC 24840

TTTGAAAAAG AAAGACTAAA AATAGCAACT GAAGAAATAA ATCTCGTCCT ATATCTCCAT 24900

TCCCTCGATT CAAAATATAA AATAGATAAT TAGTTCGATT TCCTACAAAT AGACCACCAA 24960

ACACAATCAT GAGTAAAAAG AAACTAACGC AAGCAAAGTT CG 25002

(2) INFORMATION FOR SEQ ID NO: 49:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11443 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

CAGGTACGGT GAGGCGCAAC TAAAATATAA TTTTCATCTT GATTAGGAAT TTTATCAGTA 60

TTATGATAGT GAGCATTGCC ATTGATGGAC CATAAGAGCA ATACAACTAA TCCACGCAAA 120

TAAGTATAAA ACATGCGATC TCCTTCGATT GTTTTCTTGT TATTATTATA CCTTATCAAA 180

GGAGGGCTGG CAAACTTTTC CCTTGACTAG ATACATATTT AGGATGAAAT TAGAATTCTG 240

TTAAAAAAAA TGATATAATA GAATTTATGG ATAAAAATAA GATTATGGGA TTAACCCAAA 300

GAGAAGTCAA GGAAAGACAG GCTGAGGGTT TGGTCAATGA CTTTACCGCA TCAGCCAGTA 360

CCAGCACTTG GCAAATCGTT AAACGAAATG TCTTTACCCT TTTTAACGCT TTGAACTTTG 420

CCATTGCTTT GGCTCTTGCC TTTGTGCAGG CTTGGAGCAA TCTGGTCTTC TTTGCTGTTA 480

TCTGCTTTAA CGCTTTTTCT GGGATTGTGA CCGAGCTACG AGCCAAACAC ATGGTGGACA 540

AGCTCAATCT CATGACCAAG GAAAAGGTCA AAACCATCCG TGATGGTCAG GAAGTTGCTC 600

TTAATCCTGA AGAATTAGTG CTAGGAGATG TCATTCGTTT GTCTGCAGGA GAGCAGATTC 660

CTAGTGATGC CTTGGTTTTG GAAGGCTTTG CGGAAGTCAA TGAAGCCATG TTAACGGGAG 720

AAAGTGATTT GGTGCAAAAG GAAGTTGACG GCTTACTTTT GTCAGGAAGT TTCCTAGCCA 780

GTGGGTCAGT TTTATCTCAA GTTCACCATG TCGGTGCAGA CAACTATGCT GCCAAACTCA 840

TGCTTGAGGC TAAGACCGTT AAACCCATCA ACTCCCGTAT CATGAAATCG CTGGACAAGT 900

TGGCTGGTTT TACTGGGAAG ATTATCATTC CCTTTGGTCT GGCTCTCTTG CTGGAAGCCT 960

TGCTTTTAAA AGGCCTGCCT CTCAAGTCAT CCGTTGTAAA CTCGTCGACA GCTCTTTTGG 1020

GAATGTTGCC TAAGGGAATT GCCCTTTTGA CCATTACTTC GCTCTTGACT GCAGTGATTA 1080

AGTTGGGCTT GAAAAAGGTC TTGGTGCAGG AGATGTACTC TGTTGAGACC TTGGCGCGCG 1140

TGGATATGCT CTGTCTGGAC AAGACGGGTA CCATCACCCA AGGAAAGATG CAGGTGGAGG 1200

CTGTTCTTCC GTTGACGGAA ACGTATGGTG AAGAGGCTAT TGCCAGCATC TTGACTAGCT 1260

ACATGGCCCA TAGTGAGGAT AAGAATCCAA CTGCCCAAGC CATTCGCCAG CGTTTTGTGG 1320

GAGATGTTGC TTATCCTATG ATTTCCAATC TTCCCTTCTC GAGCGACCGC AAGTGGGGGG 1380

CTATGGAGTT AGAAGGCTTG GGGACAGTTT TCTTAGGGGC ACCTGAGATG TTGCTTGATT 1440

CTGAAGTCCC AGAAGCTAGG GAGGCCTTGG AGAGAGGATC ACGTGTCTTG GTCTTAGCTC 1500

TCAGTCAGGA GAAATTAGAC CATCACAAAC CACAGAAACC ATCTGATATT CAGGCTCTAG 1560

CCTTGCTGGA AATCTTGGAC CCCATTCGAG AGGGAGCAGC AGAGACGCTG GACTATCTCC 1620

GTTCTCAGGA GGTGGGACTC AAGATTATCT CTGGTGACAA TCCAGTTACG GTGTCCAGCA 1680

TTGCCCAGAA GGCTGGTTTT GCGGACTATC ACAGCTATGT AGATTGCTCA AAAATCACCG 1740

ATGAGGAATT GATGGCCATG GCGGAGGAGA CAGCTATTTT CGGACGTGTT TCCCCTCATC 1800

AAAAGAAACT CATCATCCAA ACGTTGAAAA AAGCGGGACA TACAACGGCT ATGACAGGGG 1860

ACGGGGTTAA TGATATCTTG GCCCTTCGTG AGGCGGATTG TTCTATCGTG ATGGCGGAGG 1920

GGGATCCAGC AACCCGTCAG ATTGCCAATC TGGTTCTCTT GAACTCAGAC TTTAATGATG 1980

TTCCTGAGAT TCTCTTCGAG GGTCGTCGCG TGGTCAATAA CATTGCCCAC ATCGCCCCGA 2040

TTTTCTTGAT AAAGACCATC TATTCCTTCC TGTTAGCAGT CATCTGTATT GCCAGTGCTT 2100

TACTAGGTCG GTCAGAGTGG ATTTTGATTT TCCCCTTCAT TCCGATCCAG ATTACCATGA 2160

TTGACCAGTT TGTGGAAGGT TTCCCACCAT TCGTTCTGAC TTTTGAGCGA AATATCAAAC 2220

CTGTTGAGCA GAATTTCCTC AGAAAATCCA TGCTTCGTGC CCTACCAAGC GCTCTCATGG 2280

TCGTCTTCAG CGTCCTGTTT GTGAAAATGT TTGGCGCGAG TCAAGGTTGG TCTGAGTTAG 2340

AAATCTCAAC TCTACTCTAT TATCTCTTGG GGTCAATTGG TTTCTTATCC GTATTTAGAG 2400

CCTGCATGCC ATTTACCCTA TGGCGTGTCC TCTTGATTGT TTGGTCAGTA GGAGGTTTCC 2460

TAGCCACAGC TCTCTTCCCA AGAATTCAAA AACTGCTTGA AATTTCAACC TTAACAGAAC 2520

AAACGTTGCC TGTTTATGGT GTCATGATGT TGGTCTTTAC CGTGATTTTC ATCCTGACCA 2580

GTCGTTACCA AGCGAAAAAA TAAATCAAAA CCACCAGTGT GAACTGGTGG TTTGTTCTGC 2640

GGCTATAAGC CGCTTCTACC GGCCAGGGCC AAAGGCCCAC CGAAATAGCT TCCTCGCGCA 2700

CCACTTTCCC GAGCAGGTGC TAAAGCACCT TAGTTACTTC CTCTTATTTA TTTCGCCAGT 2760

AAACGGATCT ACTGACTCGA ATAACGTGAG CTGGTCTGCT ACTCTGTCTT CTTGTAATTG 2820

ATTCTGAATA TATTCAGCTA TCACTTTCTG ATTACGGCCT ACCGTATCTA CATAATAGCC 2880

TCTACACCAA AACTTGCGAT TGCCATATTT GTATTTTAAA TTCGCATGCT TATCAAAAAT 2940

CATCAAACTG CTCTTGCCCT TTAAATAGCC CATAAAGGAC GAAACACTAA GTTTCGGAGG 3000

AATACTGATA AGCATGTGAA TATGGTCTGA ACAAGCATTC GCTTCATGGA TTATTACACC 3060

CTTACGCTCA CATAAGTCAC GTATGATTCT TCCGATACTA GCTTTGTATC TGCCATAAAT 3120

GATTTGACGA CGATATTTGG GTGCAAAAAC AATATGATAT TTACAATTCC ATGTGGTATG 3180

TGATAAACTT TGATTATCCT CTCTCATGAG GTACCTCCTG TATGATATGT TGTAGTGGCG 3240

GAGAAACCAC TTCTATCTTA TCATTTTAGG AGGTTCTTTT TGTTACCACG CTAAAAGCTC 3300

TATGGAAcCA CTAGCATAGC TAGTGGTTTT CGGGAGACAA CAAGAAAGAC TGCAATCTGT 3360

GGATTGCAGT TTTTTATACG ATGGATCTAT CGTAGATCTG ATGTGCAAGG CCTACGTGCC 3420

GATCATCTAT CGGTGAACCC AAGAGCGACC CTCAAGCCTG CTTGGATTGA GGTAATAGAT 3480

TCAAATATCT GTAGTTAGAC TATTTGAAGT TTGATGTAAG AAAGAGAAAG CGACAGATTG 3540

AAGTAATTTT AACTCTCTTC TATTGCTAGA ACAAATGGTC GGATAGGTTG GTAGTTTGAA 3600

AATGAAGATG CTATCTATTG TTAAATGGAA CATAGTGTTA TTTATTAGAA AATCGTTTGG 3660

TTTATTTCTT ATCAAATACG AAAAGCAACT TAAATATTTC AACTAAAATA GATGTTATGA 3720

AGAAAAGGTA AAATGATTTT GGCATAGTGA GGTTCTGTTC TATTTGATAT CATATTTTTG 3780

ATAAAAACAA AAATGTCCAT TGCAAAGGAC AAAATGCGAA GTATATTATT TTTTGAAAGC 3840

GATATAATGG ATTCATAAAG GAGGTGTATC GTGTCTAGAA AACAAGAACA AATGGAAACG 3900

TTGTTGCTCC TTTTGCGAGA TAGTAAGGAT TATATATCTG CTAAAGTATT GGGAGAAAAA 3960

TTAAATTGCT CTGATAAAAC GGTTTATCGC CTTGTCAAGG GAATCAACAA AGATTGTCCG 4020

GTAGAAGCAT TCATTTTATC TGAAAAAGGC AGAGGTTTCA AATTAAATCC AAGAAGTTCC 4080

CTCGTGGACG TTGATGGGAA TTTTACAGAG GCTTTTGATC CTGAAGTAAG GCGTGAAAAA 4140

TTACTAGAAC GTCTCTTGTT GACTGCTCCT AAGCCACATT CTATTTATGA TTTAGGAGAG 4200

GAATTCTACG TAAGCGAGTC AGTAGTACTA AAAGATCGTC AGATATTACA AGAGAGTCTA 4260

GCAATTTATG GGTTAGATTT AAAAATGAGA CAACGAAAGC TTTTTATTGA TGGGGATGAG 4320

GCTCAAATTC GTTCAGCCAT TCTAAATCTA CTGCCAATGT TTAATCAGTT GGATTTAGAG 4380

CAAATTACAC AGAATAAGGT TCAGCCTCTT GACGGAGAAC TTGCTCACTT TTGTTTGGGA 4440

TTACTGATTA CACTTGAGAG AGAATTGGGG GTAAACATTC CCTATCCATA TAATATAAAT 4500

ATTTTCTCTC ACCTGTATAT TTTTATCAGT AGGAATCGTC GTAGTACTAG TATTCATGTT 4560

GTAGCACCTT CAAAACCTAC TATTGTTGAT GAGAAAATTT ACAGTGTCTG TCAAAAAATT 4620

ATTCAAGAAA TTGAACAATA TTTTAGGATG AAGGTTGATG CAGTTGAGAT TGACTATCTT 4680

TATCAATACG TTGTATCTTC GAGATTGCAA AAACCATTTT CTTCCGGGAA GCTTCCTTTT 4740

TCTCAGCGAG TTTTAGATGT CACTCATTAC TATTTTAGCC GTATGTGTAT GGACAATAGA 4800

GAGATTGAAA CGACAGATCC TGACTTTGTT GACTTGGCGA GTCATATCAG TCCCTTACTG 4860

AGGAGATTAG ATAATAGAGT ACAGATTAAG AATAGTCTTT TATCACAAAT TCTTTTAACC 4920

TATCCTAATC TGGTTAAAGA GTTAACAACT ATTTCTAAAG AAGTGAGTCT AGTATTTGGT 4980

TTTGCTTCCT TGAGTCTGGA CGAGATTGGT TTTCTAGTCT TATATTTTGC ACGGTTTCAA 5040

GAAAAGCGAG CACGTCCTCT AAAAACAGTA GTGATGTGTA CATCAGGTGT CGGAACTTCA 5100

GAGCTTTTAC GAGCACGATT AGAAAAGCAA TTTTCTGAAT TGGATATTAT TGATGTAGTT 5160

GCTTATCATC AATTAGATGA GCTGATAAAT CTATATCCAG ATTTAGATTT CATTGTGACG 5220

ACGGTAGCTT TGCAGGAACC AGCAAGTGTC CCGTTTGTCC TAGTTAGTGT TTTTCTAACC 5280

GAGGGTGATA AACAACGTCT TCAAGCAAAA ATTCAGGAGA TAAACTATGA ATAATCTTTC 5340

GCTTGTCCTT ATGGATATAT CTGTTCAAAA TCGTCAAGAA GCCTACAAAG AATTAGCAAA 5400

TCAAATCAGC CTTCTTGTTT CTGAAGATAC AGAAAAAATA GAAGAGCTTC TATATTACCG 5460

TGAGAGACAG GGAAGTATAG AGGTTGCTAA AGGTGTTCTT CTACCACATT GTGAAGGAAA 5520

CTTTCAACAT CATGTCTTAG TGATTACTAG ATTAAAATCA CCTATCAGAG AATGGTCGAA 5580

GGATATCCAG TGTGTTGACC TTATTATCGG TTTGGCCATT GCAGTATCAC AGGACAAGTC 5640

ATGTATTAAA ACATTGATGA GAAGACTAGC AGATGAATCA TTCATAAATC AATTAAAACA 5700

GTTAACAAAA GAAGAATTAC GGGAGATAAT ATATGGAAAT CAAAGATATT CTTAATGTGA 5760

GTCTGATCCA GACGGATTTA CAGATGCAGA GCAAAGAAGA GGTTTTTGAG GCATTAGCTC 5820

AACTATTGGT TGAGACGGGT TATGTGTCTG ATAGAGACCA ATTTATCGAA GGTCTTTATC 5880

AGAGAGAGGC AGAAGGACAG ACCGGTATTG GGAATTATAT TGCTATTCCC CATAGCAAGA 5940

GTTCTGCTGT GGAGAAGGCG GGGGTAGTCA TAGCTATAAA TCACAATGAG ATTCCTTGGG 6000

AGACCATTGA TGGGAAAGGG GTCAAAGTAA TTGTACTCTT TGCAGTTGGT GATGATACAG 6060

AAGCTGCTAG GGAGCATTTG AAGACCTTAT CACTCTTTGC TCGAAAACTT GGTAATGACG 6120

AAGTTGTTGC CAAATTAGTT CGGGCTCAGA CATCTGATGA TGTGATTGCA GCTTTTTGTT 6180

AATAAGAAAA AATTTTGGAG GGTATCCGTA TGAAAATTGT TGGTGTTGCA GCTTGTACTG 6240

TGGGAATTGC CCACACTTAT ATTGCACAGG AAAAATTAGA GAATGCCGCA AAGGTAGCTG 6300

GACATGTGAT TCATGTTGAG ACTCAGGGGA CAATAGGGGT AGAAAATGAA TTGAGTCAAG 6360

AGCAGATTGA TGCAGCGGAT GTAGTTATTT TAGCAGTTGA TGTTAAGATT TCTGGTATGG 6420

AACGCTTTGA GGGTAAAAAG ATTATCAAGG TTCCAACAGA AGTGGCAGTC AAATCTCCCA 6480

ATAAACTGAT TGCTAAAGCT GTTGAGATTG TTACGAAATA ACTGAAAATA TTTAAGGAGA 6540

AAATATATGT TGAAACACTT AAACTTAAAA GGTCACTTAT TGACAGCCAT TTCCTATATG 6600

ATTCCAATTG TTTGTGGTGC AGGATTCTTA GTTGCCATTG GTTTAGCAAT GGGGGGTGGT 6660

GTTCCTGACG CTCTTGTAGC AGGAAAATTC ACTATCTGGG ATGCTTTAGC AACTATGGGT 6720

GGTAAAGCCC TTGGTCTCTT GCCAGTTGTT ATTGCTACAG GTTTGTCTTA CTCGATTGCT 6780

GGTAAGCCAG GGATTGCACC AGGTTTTGTT GTTGGTCTAA TTGCCAATTC TGTTGGTTCA 6840

GGGTTTATCG GTGGTATCTT GGGAGGTTAT ATAGCTGGTT TCTTGGTTCA AGCGATTATT 6900

AAAAAGGTCA AAGTACCAAA CTGGATTAAA GGTTTAATGC CAACCTTGAT TATTCCTTTT 6960

GTAGCCTCTT TGGTAAGTAG TTTGATTATG ATTTATATTA TTGGAGCGCC TATCGCAGCC 7020

TTTACCAACT GGTTGACGAG CTTATTACAA AGCTTGGGAA GTGCTTCAAA TGGTTTGATG 7080

GGGGCAGTTA TTGGAATTCT CAGTGCTGTT GACTTTGGTG GCCCACTTAA TAAAACAGTC 7140

TATGCGTTTG TGTTGACTTT ACAGGCTGAA GGTGTGAAAG AACCATTGAC TGCTTTACAA 7200

TTGGTGAATA CTGCTACACC AGTTGGATTT GGATTGGCCT ATTTTATCGC GAAATTACTC 7260

AAAAAAAATA TCTATACTCA AGAGGAAATC GAAACATTGA AATCGGCTGT TCCTATGGGG 7320

ATTGTCAATA TTGTTGAAGG TGTAATTCCG ATTGTTATGA ATAACTTGGT TCCAGGTCTC 7380

ATTGCAACAG GTATCGGTGG TGCTGTTGGT GGTGCTGTTT CTTTGACAAT GGGTGCTGAT 7440

TCTGCTGTGC CATTTGGTGG AGTGCTTATG TTACCAACCA TGACTCGTCC AGTAGCTGGT 7500

ATTTGTGCCT TGTTAGCTAA CATTGTAGTC ACAGGACTTG TCTACGCGAT TTTGAAAAAA 7560

CCAATAAAAC ATGCAGAACC AGTTATGACT GTTGAAGAAG AGATTGATTT GTCAGATATT 7620

GAAATTTTGT AAGAGGGTAA CGATGTCAAG AATTGAATTT TCACCATCTT TGATGACCAT 7680

GGATTTGGAC AAATTCAAAG AGCAGATTAC TTTTTTGAAT GATAAAGTAG CATCTTATCA 7740

TATCGATATT ATGGATGGCC ATTTTGTTCC CAATATTACC TTGTCTCCTT GGTTCATTCA 7800

AGAAGTTCAA AAAATTAGTG ACACACCTTT ATCAGTTCAT CTGATGGTCA CAGACCCAAC 7860

CTTTTGGGTA GATCAAGTTC TCGATTTACA ATGTGAGTAT ATTTGTATTC ATGCTGAAGT 7920

TCTGAATGGT CTTGCTTTTC GTTTGATTGA TAAAATTCAT GATGCAGGTC TAAAGGCTGG 7980

TGTTGTCCTT AATCCTGAAA CACCTGTTTC TACAATCTTT CCCTACATTG ATTTACTTGA 8040

CAAAGCAACT ATTATGACTG TAGATCCAGG TTTTGCAGGA CAACGCTTTT TGGAGTCTAC 8100

CTTGTATAAA ATCCAAGAAC TCCGTCAGCT TAGAGTTCAG AATGGTTATC ACTACATCAT 8160

TGAGATGGAT GGTTCTTCGA GTCGTAAGAC TTTCAAACAA ATTGATGTGG CAGGACCAGA 8220

TATTTATGTT ATAGGTCGCA GTGGATTATT TGGTTTGGAT GACGATATTG CCAAAGCCTG 8280

GGATATCTGT TCTAGAGATT ACGAAGAAAT GACCGGAAAA ACAATGCCAA TCAAATAATG 8340

GTTTGAGAAG AAATTTATTA GTTAGGAGGA ATATATGTCA CTACAATCAG TTAACGCCAT 8400

TCGTTTTCTT GGCGTAGATG CTATTAACAA ATCTAATTCT GGTCACCCGG GAATTGTCAT 8460

GGGTGCTGCG CCAATGGCTT ATAGCCTATT TACAAAGCAC CTTAGAATTA CACCTGAGCA 8520

GCCAAACTGG ATTAACCGAG ATCGCTTTAT CTTGTCTGCG GGTCATGGAT CAATGCTACT 8580

GTATGCTCTC TTGCATTTAA CAGGGTATAA GGATGTATCC ATGGACGAGA TTAAAAATTT 8640

CCGGCAATGG GGATCTAAGA CACCTGGTCA TCCTGAAGTG ACGCATACGT CTGGTGTGGA 8700

TGCGACATCT GGTCCGCTTG GTCAGGGGAT TTCTACTGCC GTTGGTTTCG CCCAAGCAGA 8760

GCGTTTTTTA GCTGCTAAGT ACAACAAAGA TGGTTTCCCT ATTTTTGACC ATTATACTTA 8820

TGTTATCGCT GGAGACGGTG ACTTCATGGA AGGAGTGTCT GCGGAGGCGG CTTCTTATGC 8880

AGGTCATCAA GCTTTAGATA AGCTTATCGT CCTCTACGAC TCCAACGACA TCTGCTTGGA 8940

TGGTGAGACC AAAGATACTT TCTCTGAAAA TGTTCGCGTC CGTTACGATG CTTATGGTTG 9000

GCATACAGTT CTGGTAGAAG ATGGAACAGA TTTAGCAGCA ATTTCTACAG CAATTGAGAC 9060

GGCCAAGTTT TCTGGTAAAC CGAGTTTGAT TGAAGTGAAA ACGGTAATTG GTTACGGCTC 9120

ACCCAATAAA AGTGGTACAA ATGCTGTTCA TGGTGCACCA CTAGGAGCAG AAGAAACAGG 9180

AGCAACTCGT AAGTTTTTGG GATGGGATTA CGATCCATTT GAAGTACCAG AGGAAGTATA 9240

TTCTGATTTC AAGACAAATG TAGCGGATCG TGGTCAGGAG GCATACGATG CTTGGGCTAG 9300

TTTGGTGTCT GATTACAAGG TTGCTTATCC CGAAGTTGCT AGTGAGATTG ACGCTATTGT 9360

AGCTGGAAAA TCCCCTGTAA CCATTACTGA AAAAGACTTC CCTGTCTATG AGAATGGCTT 9420

CTCTCAAGCA ACTCGTAATT CGTCCCAAGA TGCTATTAAT ACAGCAGCAG TTTTACCAAC 9480

CTTCTTAGGT GGATCGGCAG ACTTAGCTCA CTCTAACATG ACCTACATCA AGGCAGATGG 9540

CTTACAAGAT AAATATAATC CATTAAACCG CAATATTCAG TTTGGGGTAC GTGAATTTGC 9600

CATGGGAACA ATCCTCAATG GAATGGCTCT TCATGGTGGT TTACGAGTTT ATGGCGGAAC 9660

CTTCTTTGTT TTCTCTGACT ACGTCAAAGC TGCTATTCGG CTATCAGCCA TTCAGGAGTT 9720

GCCTGTAACT TATGTCTTTA CCCATGATTC AATTGCCGTT GGTGAAGATG GTCCAACTCA 9780

TGAACCAGTT GAACATTTGG CAGGTTTACG CTCAATGCCA AACTTGACTG TTATCCGTCC 9840

AGCGGATGCC CGTGAAACTC AAGCGGCTTG GCATCATGCC TTGACCAGTA CCACCACTCC 9900

AACTGTCATT GTCTTAACCC GTCAAAACTT GGTAGTTGAA GAAGGGACAG ACTTTGGTAA 9960

GGTCGCTAAA GGAGCCTACG TCGTGTATGA TACCCCGGGA TTTGATACTA TTATCATTGC 10020

TACAGGATCT GAGGTCAATC TAGCTATCAA AGCTGCTAAG GAATTGGTTT TACAAGGTGG 10080

TAAAGTACGT GTGGTATCTA TGCCCTCAAC CGAACTATTT GATGCTCAAG ATGCTACCTA 10140

CAAGGAAGAC ATTTTACCAT CTAAGACTCG TCGTCGTGTG GCCATTGAAA TGGCAGCGAC 10200

CCAAAGTTGG TACAAGTATG TTGGTTTGGA TGGCGCGGTC ATCGGTATTG ACATCTTCGG 10260

TGCGTCTGCC CCAGCTCAGA CTGTGATTGA TAATTATGGA TTTACGGTAG AGAATATCGT 10320

TGCTCAAGTT AAGTCCCTAT AGAAACCAAT TACAATGAAG ATACAGCTGT TGTCAGACTA 10380

GCAGATGTAG TGATAGACAC TAATCAGATG ATTGGTTATT TAAAAACTGT AATGAAAATG 10440

TAATAATTTA TCTACGAAAG TTATAGTAGA TAGTATACAC AATAGAGTAT ACCCTGAAAC 10500

GGTTGCGAAG TACGCTAATC ACTTTGCTAC TGATCTAGAT AGTTTCTTTA ATCAATAAAC 10560

ACAGCATCCA CAGATTGACT TAGGATATTG TAAGTTTTTT GAAAGCTAGA GAGAAGGTCT 10620

CTAAAATTAA AAAACGCATA GTATAGGATG TTGAAATGAT GAACTGCACC CCAAAAGTTA 10680

GACAGAAAAA AATCTAACTT TTGGGGTGTT TTTATTATGA AATTAACTTA TGATGATAAA 10740

GTTCAGTTCT ATGAACTTAG AAAACAAGGA TATATCTTAG AGAAGCTTTC AAATAAATTT 10800

GGGATAAATA ATTCTAATCT TAGGTACATG ATTAAATTGA TTGATCGTTA CGGAATAGAG 10860

TTCGTCAAAA AAGGGAAAAA TCGTTACTAT TCTCCTGATT TAAAACAAGA AATGATTCAT 10920

AAAGTCTGAC ATGAAGGCTG GACTAAAGAT AGAGTTTCTC TTGAATACGG TCTCCCAAGT 10980

CGTACGATAC TTCTTAACTG GCTAGCACAA TACAGGAAAA ACGGGTATAC TATTGTTGAG 11040

AAAACAAAAG GGAGAGTACC TGAGAGCGGA GAATGCCATC CTAAAAAAGT TAAGAGAACT 11100

CCGATTGAAG GAGGAAAAAG AGAAATAAGA AAGACAGAAA TTGTTCAAGA ATTAATGACT 11160

GAGTTTTCGT TAGATCTTCT TCTAAAAGCC ATTAAACTAG CTCGTTGGAC CTACTACTAT 11220

CACTTGAAAC AGCTAGATAA ACCAGATAAG GACCAAGAGC TTAAAGCTGA AATTCAATCC 11280

ATCTTTATCG AACACAAGGG AGATTATGCT TATCGCCGGG TTCATTTAGA ACTAAGAAAT 11340

CGTGCTTATC TGGTAAATCA TAAAAGAGTT CAAGGCTTGA TGAAAGTACT CAATTTACAA 11400

GCTAGAATGC GACAGnAACG AAAATATTCT TCTCATAAAG GAG 11443

(2) INFORMATION FOR SEQ ID NO: 50:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5338 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

CCAATTACAT TATATTATCA AAATCGTCGA AACTGGCTCC ATGAATGAGG CAGCCAAGCA 60

ACTCTTTATC ACTCAGCCAA GTCTCTCCAA TGCAGTGCGA GATTTGGAAA ATGAAATGGG 120

CATTGAGATC TTTATCCGCA ATCCCAAGGG AATCACCTTG ACCCGTGATG GCATGGAGTT 180

TCTCTCTTAT GCCCGTCAGG TTGTCGAGCA GACCCAGCTT CTGGAGGAAC GCTATAAAAA 240

TCCTGTCGCC CACCGCGAAC TCTTTAGCGT TTCGTCTCAA CACTATGCCT TTGTGGTCAA 300

TGCCTTTGTC TCTTTGCTCA AGAAAAGCGA TATGGAGAAA TACGAACTCT TCCTTCGTGA 360

AACTCGGACT TGGGAGATTA TCGACGACGT CAAGAACTTC CGCAGTGAGG TCGGGGTCCT 420

CTTCTTAAAC AGTTACAACC GTGATGTTTT AACCAAGATG CTGGATGACA ATCACCTGCT 480

AGCCCACCAT CTCTTCACAG CGCAACCGCA TATCTTTGTC AGCAAGACCA ACCCTCTGGC 540

AAAGAAAGAC AAGGTGAAAC TGTCTGATTT GGAGAATTTC CCTTACCTCA GCTATGACCA 600

AGGGACGCAC AACTCCTTCT ACTTTTCAGA AGAGATTCTT TCTCAAGAAC ACCACAAGAA 660

ATCCATTGTG GTCAGTGACC GTGCCACCCT CTTTAATCTC TTGATTGGTT TGGATGGTTA 720

TACCATTGCG ACAGGGATTT TGAACAGCAA CCTAAACGGA GACAATATCG TTTCTATCCC 780

ACTGGATATT GATGACCCGA TCGAGCTGGT CTATATCCAG CATGAGAAAA CCAGCCTATC 840

TAAGATGGGC GAACGCTTTA TAGACTATCT CCTAGAAGAA GTTCAGTTTG ATAGTTGAGA 900

AATGATAAGA ACCAATATGT AGGCTAGCAA CAACCTGCAC ATTGGTTCTT TTTACTTATA 960

ATTAAAAGTT TCCCCTGCCA ACTTATCAGC TAGCTTGGGA AAGAGAGTAT AAAACTTATG 1020

GGCTAGGTTC AACAAAATCG GGAGATTGAG TTCTCGTTTG TTTTTTCCTA TAATCTTGAC 1080

AATCTTTTTA GCCACTGCAT CTGGTTCTAG CAGGAAGCGA TCAACCGATT TAAGATAAGT 1140

TCCATCTGGG TCGGCTTGGT CGAAAAATCC TGTACGGATT GGTCCTGGAT TGACTGTTGT 1200

CACATAGACT CCATAGGGCA TAAGTTCGAG TCGCAGAGCA TTTGAAAAAC CAATAGCCGC 1260

AAACTTGGTC GCTGAGTAAA GACTAGACTT GCCAGTAGCT ATTAGACCTG CCATGCTGAC 1320

GATGTTGATG ATATGCCCTT TGCTGCTTTC CTTCATACGA GCCGCAAGGT GACGAGACAG 1380

ATTCATCAGG GCAAAGGTAT TGACCTCAAA CATCTGGTGA ATATCTTTAT CAGCAATCTG 1440

GTCAAATCCC TCAAAAATCC CGTAACCAGC GTTGTTAATC AAGACATCAA TCTTGCCATA 1500

GCGGAGATAA AGATCAGTTA CCAGAGCTTC TAGGGCTGAA TCGTCGGTAA TATCAATTTC 1560

AATCAATTCT GCATGGGAAT AATTTCCGTA GAGTTGGGCT AATTTTTCCT TATTTCTACC 1620

AAGCAAGATG AGTTGGTCAT TGGGCAGGAG TTTGACCATT TCTTGAGCTA GACCACCGCT 1680

AGCTCCGGTA ATGAGAATAG TAGGCATACT TATCCTTTCT GTGACTGCTA GATTTCCACT 1740

TCTTCCAAGT CTTTGACCAC ATGGACATTT TCAAAAATTG TGGCAGCGTC TTTCTTGAGT 1800

TTGCTAATAT CTTTTGAGAG GAAACGGGCA CTGATATGGT TGAGTAGGAG GCGTTTGGCA 1860

CCTGCTTCTA CCGCTACTTG TGCAGCTTGC ATATTAGTTG AGTGACCATG GTTACGAGCA 1920

ATTTTTTCAT CACCCTTGCC ATAAGTGGAC TCATGAACTA GGACATCTGC ATTGACAGCC 1980

AGACGCACAC TGGCACCCGT TTTTCGAGTG TCTCCTAAAA TAGTGATAAT CTTACCTGGA 2040

CGTGGCGCTG AGATATAGTC TGCTGCCTTG ATTTCAGTTC CGTCTTCCAA AACAAGATCC 2100

TGGCCGTTTT TGATTTTACC AAAAAGCGGG CCGAACGGAA CACCAGCAGC CTTGAGTTTT 2160

TCAGCATCCA GCGTCCCTTC TAGATCCTTT TGCATGACAC GATAGCCAAC ACAGAAAATA 2220

GTGTGGTCCA GCTCCTCTGC ATACACAGTG AATTTATCGG TTTCAAGAAT TTTACCCAGA 2280

GAATCTTGGT CAAACTCATG GAAATGAATG CGGTAGGGCA GACGAGAACC TGACACACGA 2340

AGGCTGGTTA AGACAAATGA CTTGATTCCT TGAGGTCCGT AGATTTCCAA ATCTGTCTGC 2400

TCTTCATTGG CCTGAAAGGC ACGGCTAGAA AGGAAACCTG GCAAACCAAA AATGTGGTCT 2460

CCATGCAGAT GGGTAATAAA GATTTTGCTG ACCTTACGTG GTCGAATTGT GGTTTCCAGA 2520

ATGCGATTTT GCGTACCTTC TCCACAGTCA AAGAGCCAAA CTTCGTTAAT CTCATCCAAA 2580

AGTTTCAGGG CGAGACTTGA AACGTTGCGG GCTTTAGAGG GCTGACCAGC CCCCGTTCCT 2640

AAAAATTGAA TATCCATTCG ATACTTTCTA ATTAATCAAT ATATAACATG GCTGTGCGGT 2700

TTTCCGATCG GAAATAGCGT TTGCCAGAAA AAGCAGCAGC TTCTTGCAAT AAATCCTCTT 2760

GGCTGTAGCC TTTGAGACGT TTTCGACCAT CAGCCAATCT TTCCAAATCA GTCAAAGCTG 2820

TGAGACTTTC TAGGCTGATA ACTTCCTCGT CCTCGACAGG CTTCATGTAA ATCTTACCAG 2880

ACTCTTCAAA GACTAATTGA TGGGGGAAAA TTTGCGCAAT TTCAAAGAGC AAGTCATCCG 2940

AGATTTTCTC CTCATTTTCA AAGAAAATCC GACCAAGGCC GTCACTCTCA TAACAAAAAC 3000

CAAAGGATTT ACCAGACAGA TTAAGCCGAA TAAAAGGCTT ATTTTCTAGG GTGAAACTTG 3060

GCTCAGTATT GTAAAGATTC AGTTCCTGAC TGAGTTCTGC AAAATAATCC GTCGCAGCCT 3120

GAGGACTCTT TTTCTGATAG AGTTCTGCAA AGTAGGCATT AACAACACTT GGCGGAGGTG 3180

TAATAAGTGT TAACTGCTCC TGATCTGTTT TACCAGCTAG AAGCTGATCC AGATAGACCT 3240

TGTCCAGACT TGTATAACCT CCATACTTTA GAGCCAAAGT TTTAATATCA GTCATAAAAT 3300

TCTTCTAACC TCCATTTATT TTTCTCGGAA ATGTAGCCTG TAATCACTTC GCCGTCTTCC 3360

TGATAATCAC GTTCTTCCAG AATTGCAACA CTCTCTAAAT CATGAATCTT GTAGGACTTT 3420

GAAAAAGGCA CTCGCAGGGT AAATGCTTCA AAAATTTCCT TAATCTTATC TAGCAATAAT 3480

GCTTGCAAGT TTTCACGACT GTCCTCAGAC TTGGCAGAAA TGAGGGTATA TGGCGTTTGG 3540

GTAGGCGTGA AATCCTCCAC CAAATCCGCT TTATTATAAA GCGTCAAGTG AGGAATATCT 3600

TCCATGTCCA GGTCTTTCAT GATGGAGAGA ACCGTTTTTT CATGCTCCTC GTGGTAAGGA 3660

TTGCTAGCAT CGATAACATG AACCAGAAGG TCCACATGCT TGCTTTCTTC CAAGGTTGAC 3720

TTGAAACTGG ACACCAACTC TGTCGGCAAA TCTTGGATAA AGCCAACGGT ATCTGTCAAA 3780

GTTACTTGGA GATTGCCTCC CAGATGAATA CTCTTGGTTG TCGCATCCAG AGTCGCAAAG 3840

AGCTCATCTG CTTCATACTG GGTCTTACTG GTCAAGATGT TCATGATAGT TGATTTCCCA 3900

GCATTAGTAT AACCAATCAA ACCAATCTTA AAAGTGCTAG ACTCCAAACG TTTTTCTCTG 3960

ACAGTCGCAC GATTTTTCTC AACCACCTTG AGCTGGCGCT CGATATCCGT GATTTGATTG 4020

CGAACGCTAC GACGGTTCAG CTCCAGCTGG CTTTCACCAG GACCACGGGA ACCAATTCCC 4080

CCTgCCTGAC GGCTGAGCAT AATCCCCTGA CCAACCAAGC GAGGCAAAAG GTATTTGAGT 4140

TGGGCTAGGT GGACTTGGAG CTTCCCTTCA TGGCTTCGAG CCCGCATGGC AAAGATATCC 4200

AAAATCAACT GCATACGGTC AATGACCTTA ACACCGAGAA CTTCCTCTAG ATTGACATTC 4260

TGCCTTGGGG TCAGACGATT GTTGACGATG ACAGTAGTGA TTTCTTCTGC ATCCACCATA 4320

AGCGCAATCT CTTCCAACTT ACCAGAGCCG ACGAAGGTCT TGGAATCATA TTTTTCACGT 4380

TTTTGTCTGT AGCTATCTAC AACGACTGCC CCTGCCGTTT TCGCTAAACT AGCCAATTCT 4440

TCCATGGAGA GGTCAAAACT GTCCATACCC TGCAATTCCA CACCAATCAG CAGGACTCGC 4500

TCCTCTTTTT TCTCCGTTTC AATCATCTAA AAACTCCTCT ATCTGGCTTA AAATGCGGTC 4560

TTGTACACCA GATTCTCCAA TCTGATAAAA GGTGACCTGC ATGCGATTAC GGAACCAGGT 4620

CAGCTGACGC TTGGCAAAAC GACGAGTCGC CTGTTTAAGA CTCTCACTAG CTTCCTCCAA 4680

GGTCTGCTCT CCACGGAAAT AAGGAAAGAG TTCCTTATAG CCAATTCCTT TAGCAGCCTG 4740

TACATTAGGG GAATGGTCAA ACAGCCACTT GGCCTCATCC AAAAGCCCAG CCTCAAACAT 4800

CAAATCCACT CGGTGGTTGA TACGCTCATA AAGTTGACTA CGTTCATCAT CCAAGCAGAT 4860

AATCAGCGGT TCATACAAGG TCTCTTGATT TTCCAAATCC TGACCAAAAT GGGCAATTTC 4920

TAAGGCACGC ATAGCACGAC GACGATTAAA CTGGGGAATC TCAAGGCCTG CTTGATCCAC 4980

CAAATGGGCT AATTCCTCAT CTGAATATGG CTCCAAACTA GCTCGATAAG CTAAAATCTC 5040

CTCATGAGGA GTCTCCCCAC CTAGGTGGTA ACCTTCTAGC AAGCTCTGGA TATAAAGTCC 5100

AGTCCCACCG GCGATAATGG CTAGCTTGCC ACGGTTGTGA ATACCCTCAA TAGTCATCTT 5160

AGCTTCTGAA ACAAAATCAA AAGCCGAGTA AGACTCGGTT ATCTCTCTAA CATCGATTAA 5220

ATGATGAGGA ACAGCTGCCT GCTCTTCTGG ACTAGCCTTG GCCGTCCCAA TATCAAGTCC 5280

TCGATAGACT TGCTGGCTAT CTCCACTAAC CACTTCGCCA TTAAAACGCT TTGCGGGG 5338

(2) INFORMATION FOR SEQ ID NO: 51:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19446 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

CGGAAACCCA TCTAGTCTCC ATCGTTTGGG AGACCAAGCA ACACGAATCT TAGATGCTTC 60

TCGCCAACAG ATTGCAGATT TAATCGGTAA GAAAAGCGAT GAAATCTTCT TTACCTCGGG 120

TGGAACAGAA GGGGATAACT GGCTTATCAA GGGTGTGGCC TTTGAAAAAG CTCAGTTTGG 180

CAAGCACATC ATTGTTTCAG CCATTGAACA TCCAGCAGTC AAAGAGTCAG CCCTCTGGTT 240

GAAAAGTCAA GGATTTGAAG TGGATTTTGC TCCAGTTGAT AAGAAAGGCT TGGTCGATGT 300

TGAGGCGTTA CAGGTTTGAT ACGGCATGAT ACAATCCTCG TTTCCATCAT GGCTGTGAAC 360

AATGAAATCG GCTCTATCCA ACCTATTGAG GCTATTTCAG AATTCTTGGC AGACAAGCCG 420

ACTATTTCCT TCCACGTTGA TGCGGTTCAG GCGCTTGCCA AAATTCCGAC TGAAAAGTAT 480

CTGACAGAAC GGGTGGATTG CGCGACTTTC TCTAGTCACA AGTTCCACGG GGTTCGAGGT 540

GTTGGCTTTG TCTATATCAA ATCTGGCAAG AAGATTACAC CTCTTCTTAC AGGTGGTGGC 600

CAGGAGCGAG ATTATCGTTC GACAACTGAA AATGTGGCAG GGATTGCAGC GACAGCCAAG 660

GCCCTCCGTT TGTCTATGGA AAAGCTAGAT ATCTTTAGGA GCAAGACTGG GCAGATGAAG 720

GCAGTGATTC GCCAAGCTCT TCTGAACTAT CCGGATATTT TTGTCTTTTC AGATGAGGAA 780

AACTTTGCAC CTCATATTCT GACTTTTGGA ATCAAAGGTG TTCGAGGTGA AGTCATCGTT 840

CACGCCTTTG AAGACTATGA TATTTTCATC TCAACAACCT CAGCTTGTTC ATCTAAGGCA 900

GGAAAACCAG CCGGTACCTT GATTGCCATG GGAGTGGACA AAGATAAGGC CAAGTCAGCT 960

GTGCGTCTTA GCCTAGACTT GGAAAATGAT ATGAGTCAGG TCGAGCAGTT TTTGACCAAG 1020

TTAAAATTGA TTTACAATCA AACTAGAAAA GTAAGATAGG AGCATTCATG CAGTATTCAG 1080

AAATTATGAT TCGCTACGGA GAGTTGTCAA CCAAGGGTAA AAACCGTATG CGTTTCATCA 1140

ATAAACTTCG TAATAATATT TCGGACGTTT TGTCTATCTA TACCCAAGTT AAGGTAACAG 1200

CAGATCGCGA CCGTGCCCAC GCTTACCTCA ATGGAGCTGA TTACACAGCA GTTGCAGAAT 1260

CTCTCAAACA AGTTTTTGGA ATTCAAAACT TTTCTCCTGT TTATAAGGTT GAAAAATCTG 1320

TAGAAGTTTT GAAGTCTTCT GTCCAAGAGA TTATGCGGGA CATCTACAAG GAAGGTATGA 1380

CCTTTAAGAT TTCTAGCAAG CGTAGCGACC ACAACTTTGA ACTTGATAGT CGTGAACTCA 1440

ACCAAACACT TGGAGGGGCT GTATTCGAAG CCATTCCAAA TGTGCAAGTT CAAATGAAAA 1500

GTCCTGACAT CAATCTTCAG GTGGAGATTC GTGAAGAAGC AGCCTATCTT TCTTATGAAA 1560

CCATTCGTGG GGCTGGTGGT TTGCCAGTTG GAACTTCAGG TAAAGGGATG CTCATGTTGT 1620

CAGGAGGGAT TGACTCACCT GTAGCAGGTT ATCTTGCTCT TAAGCGTGGG GTGGATATCG 1680

AGGCAGTTCA CTTTGCTAGT CCACCATATA CTAGTCCTGG TGCCCTCAAG AAAGCGCAGG 1740

ACTTGACCCG TAAATTGACC AAGTTTGGCG GAAATATCCA GTTTATAGAG GTGCCTTTCA 1800

CAGAGATTCA AGAGGAAATC AAAGCCAAAG CGCCAGAAGC TTATTTGATG ACTCTAACTC 1860

GTCGCTTTAT GATGCGGATT ACTGACCGTA TTCGTGAGGT ACGAAATGGT TTGGTTATCA 1920

TCAATGGGGA AAGTCTAGGT CAAGTAGCCA GCCAAACCCT TGAAAGTATG AAGGCTATCA 1980

ATGCTGTTAC CAACACTCCC ATCATTCGTC CTGTGGTTAC CATGGACAAG TTGGAAATCA 2040

TTGACATCGC CCAGGAAATC GATACCTTTG ACATTTCAAT CCAACCGTTT GAAGACTGTT 2100

GTACCATTTT TGCACCAGAT CGTCCAAAAA CAAATCCTAA AATTAAGAAT GCGGAGCAGT 2160

ACGAAGCGCG TATGGATGTT GAAGGCTTGG TTGAGCGAGC AGTGGCTGGA ATCATGATTA 2220

CTGAAATCAC ACCTCAAGCC GAAAAAGATG AAGTTGATGA CTTGATTGAC AATCTGCTCT 2280

AATTCAGAAA ATCCAAAAGA ATAGCGAAAA TCAGTAAAAA AAGTTAGTTT TTTCTCTAAA 2340

AACAGGTAAA AAACTAACTT TTTTTATTTT TATGATATAA TGATATAAAA TTTTGAATAT 2400

AGAGAGTTTT CTGACAATGA ATCAATCCTA CTTTTATCTA AAAATGAAAG AACACAAACT 2460

CAAGGTTCCT TATACAGGTA AGGAGCGCCG TGTACGTATT CTTCTTCCTA AAGATTATGA 2520

GAAAGATACA GACCGTTCCT ATCCTGTTGT ATACTTTCAT GACGGGCAAA ATGTTTTTAA 2580

TAGCAAAGAG TCTTTCATTG GACATTCATG GAAGATTATC CCAGCTATCA AACGAAATCC 2640

GGATATCAGT CGCATGATTG TCGTTGCTAT TGACAATGAT GGTATGGGGC GGATGAATGA 2700

GTATGCGGCT TGGAAGTTCC AAGAATCTCC TATCCCAGGG CAGCAGTTTG GTGGTAAGGG 2760

TGTGGAGTAT GCTGAGTTTG TCATGGAGGT GGTCAAGCCT TTTATCGATG AGACCTATCG 2820

TACAAAAGCA GACTGCCAGC ATACGGCTAT GATTGGTTCC TCACTAGGAG GCAATATTAC 2880

CCAGTTTATC GGTTTGGAAT ACCAAGACCA AATTGGTTGC TTGGGCGTTT TTTCATCTGC 2940

AAACTGGCTC CACCAAGAAG CCTTTAACCG CTATTTCGAG TGCCAGAAAC TATCGCCTGA 3000

CCAGCGCATC TTCATCTATG TAGGAACAGA AGAAGCAGAT GATACAGACA AGACCTTGAT 3060

GGATGGCAAT ATCAAACAAG CCTATATCGA CTCGTCGCTT TGCTATTACC ATGATTTGAT 3120

AGCAGGGGGA GTACATCTGG ATAATCTTGT GCTAAAAGTT CAGTCTGGTG CCATCCATAG 3180

TGAAATCCCT TGGTCAGAAA ATCTACCAGA TTGTCTGAGA TTTTTTGCAG AAAAATGGTA 3240

AGTTAAGAAA GGAAAAAACG AAATGCATAT TGAACATCTT AGCCACTGGA GTGGTCATCT 3300

TAACCGTGAA ATGTACCTTA ACCGTTATGG ACATGGTGGG ATTCCAGTTG TGGTCTTTGC 3360

TTCATCAGGT GGTAGTCACA ACGAATACTA TGATTTTGGC ATGATTGATG CCTGTGCTTC 3420

CTTTATCGAG GAAGGCCTTG TCCAGTTCTT TACCCTATCT AGTTTGGATA GTGAGAGCTG 3480

GTTGGCTACT TGGAAAAATG CTCATGACCA AGCGGAAATG CACCGTGCCT ACGAACGTTA 3540

TGTGATTGAG GAGGCCATTC TTTTATCAAG CACAAGACAG GTTGGTTTGA TGGCATGATG 3600

ACGACAGGTT GCTCTATGGG AGCCTATCAT GCACTCAATT TCTTCCTCCA GCATCCAGAT 3660

GTCTTTACCA AAGTGATTGC TCTCAGTGGT GTTTACGACG CACGTTTCTT TGTCGGTGAT 3720

TACTACAACG ATGATGCTAT TTACCAAAAC TCGCCAGTAG ATTATATTTG GAACCAAAAC 3780

GACGGCTGGT TTATTGACCG TTACCGTCAG GCAGAGATTG TGCTGTGTAC GGGGCTTGGA 3840

GCCTGGGAAC AAGATGGTTT GCCATCCTTT TACAAGCTCA AAGAAGCCTT TGACAAGAAA 3900

CAAATTCCAG CCTGGTTTGC TGAATGGGGA CATGATGTCG CCCATGACTG GGAATGGTGG 3960

CGTAAACAAA TGCCTTATTT CCTCGGTAAT CTCTATTTAT AAAAGGAGTT ACCTATGAAT 4020

TACCTTGTTA TTTCTCCCTA CTATCCACAA AACTTTCAAC AGTTTACCAT CGAACTAGCT 4080

AATAAAGGCA TCACAGTCTT GGGAATTGGT CAAGAGTCTT ACGAGCAATT GGATGAGCCC 4140

TTGCGCAATA GCTTGACCGA GTATTTTCGT GTTGATAATC TTGAGAACAT AGATGAAGTC 4200

AAACGTGCAG TTGCTTTTCT CTTTTATAAA CATGGTCCAA TTGGCCGCAT CGAGTCTCAC 4260

AATGAATACT GGCTTGAGCT AGACGCAACA CTCAGAGAAC AATTCAATGT TTTTGGTGCC 4320

AAACCAGAGG ATCTCAAAAA GACGAAATAT AAGTCTGAAA TGAAGAAACT TTTCAAAAAA 4380

GCAGGTGTTC CTGTGGTACC TGGAGCTGTT ATCAAGACGG AAGCAGATGT TGATCAAGCA 4440

GTGAAAGAAA TCGGTCTTCC AATGATTGCC AAACCTGATA ATGGAGTGGG AGCAGCCGCA 4500

ACCTTTAAAC TTGAGACAGA AGACGATATC AATCACTTCA AGCAAGAATG GGACCATTCA 4560

ACCCTTTATT TCTTTGAAAA ATTTGTCACT TCCAGCGAAA TCTGTACCTT TGACGGGCTC 4620

GTGGACAAGG ATGGAAAGAT TGTCTTCTCA ACAACCTTTG ACTACGCCTA TACACCGCTT 4680

GACCTCATGA TTTATAAGAT GGACAATTCT TATTATGTGC TCAAGGATAT GGATCCTAAA 4740

CTGCGCAAGT ATGGGGAAGC AATTGTCAAA GAATTTGGTA TGAAAGAACG GTTTTTCCAT 4800

ATTGAGTTCT TCCGTGAGGG GGACGATTAT ATTACCATCG AGTACAATAA CCGCCCTGCA 4860

GGTGGTTTTA CCATTGATGT TTATAACTTT GCTCATTCCT TGGACCTTTA TCGTGGCTAT 4920

GCAGCTATTG TCGCAGGAGA GGAGTTCCCG GCGTCAGACT TTGAAACTCA GTATTGTTTG 4980

GCTACTTCTC GCCGTGCAAA TGCTCACTAT GTTTATTCAG AAGAGGATTT GCTTGCCAAA 5040

TATAGCCAGC AGTTCAAGGT TAAAAAAGTC ATGCCAGCTG CCTTCGCGGA ACTTCAAGGA 5100

GATTACCTGT ATATGCTGAC CACTCCGAGT CGACAAGAAA TGGAGCAGAT GATTGCAGAT 5160

TTCGGACAAC GTCAAGAATA AGAACTATCG GATTAAGGAA ATTAACTCCC TTAATCCTTT 5220

TGTTTTGTCT GATAAAAAAT AAGAGCATCC CAACAAGGTA GCTATCATAA AACTTGTTCG 5280

ATAACTATTT GAAGCAGGAT TAGGTGGTCA GAAATTAAAT TTTAATATTT CAATTGAGTC 5340

ATAGTATTGT GTTTGCGTAT CCTTAAATCA GCTAAAAGGA TCCATGACGA CACCTATACG 5400

ATATAGTTTT CAAGATACCA AACAAGTCTA TTAATATTCA ATGAAAATCA AAGAGCAAAC 5460

TAGGAAGCTA GCCGCAGGTT TCTCAAAACA CTGTTTTGAG GTTGTGGATA GAACTGACAG 5520

AGTCAGTATC ATATACTACG GCAAGGTGAA GCTGACGTGG TTTGAAGAGA TTTTCGAAGA 5580

GTATAAAATA TTCAGGTGAC GCATAGATAT AGTTAATTGA AGCTTTGTTT GAAATCTGAT 5640

AAAATAATGA TATTACTAAG TTTTAAAAAC TAAAGAAAAG GGAAGATATG ATTACAGGCG 5700

AATTAAAAAA TAAAATCGAT CAGCTGTGGG AAATTCTTTG GACAGAAGGA AACGCAAATC 5760

CTTTAACAAA TATTGAACAG TTGACTTATC TCTTATTTAT GAAAGATTTG GATAGTGTCG 5820

AGCTTGGACG TGAAAGTGAT GCTGAATTTC TAGGGATTCC TTATGAGGGA GTTTTTCCAA 5880

AAGATAAACC TGAATACCGT TGGTCAACTT TTAAAAATAT AGGAGATGCT CAGGAAGTTT 5940

ATCGTTTAAT GACTCAGGAG ATTTTTCCGT TTATTAAAAA TCTCAAGGGG GATACAGATG 6000

ATACAGCCTT TTCACGATAT ATGCGAGAAG CTATTTTTCA AATAAATAAA CCTGCTACGC 6060

TTCAAAAGGC AATTTCTATC TTAGATGTTT TTCCAACTAG GGGATTAGAT GTAGATTTTG 6120

ATAATGACAA ACAAAGTATT ACTGATATCG GAGATATCTA TGAATATCTG TTATCAAAAT 6180

TGTCGACCGC AGGTAAAAAT GGACAGTTCC GTACACCTCG TCACATCATC GATATGATGG 6240

TTGAGTTGAT GCAACCGACT ATCAAAGATA TCATCTCAGA TCCCGCTATG GGTTCTGCTG 6300

GCTTCTTAGT ATCTGCTAGC CGTTACTTAA AGCGTAAGAA AGATGAATGG GAAACCAATA 6360

CAGATAATAT CAATCATTTT CATAATCAGA TGTTTCATGG AAATGATACG GATACGACTA 6420

TGTTGAGACT TGGGGCGATG AACATGATGC TACATGGAGT AGAAAATCCA CAAATCAGTT 6480

ACCTTGACTC GCTGTCTCAA GATAATGAAG AAGCCGATAA ATATACTTTG GTTTTAGCAA 6540

ATCCTCCTTT TAAGGGCTCA CTTGACTACA ATTCAACCTC TAATGACCTT CTTGCAACCG 6600

TAAAAACCAA AAAAACAGAA TTACTCTTTC TTTCTCTTTT CTTGCGAACT TTAAAACCAG 6660

GTGGACGAGC AGCAGTTATC GTACCTGATG GTGTCCTTTT TGGTTCGTCT AAAGCTCATA 6720

AAGGAATTCG TCAGGAAATT GTAGAGAATC ATAAGCTTGA TGCTGTAATC TCAATGCCTA 6780

GTGGTGTGTT CAAGCCTTAT GCTGGAGTTT CAACTGCCAT TCTCATCTTT ACAAAAACTG 6840

GTAATGGTGG TACTGACAAA GTCTGGTTTT ACGATATGAA AGCGGATGGT TTAAGTTTGG 6900

ATGATAAGCG ACAACCGATT AGCGACAATG ATATTCCAGA TATTATCGAA CGCTTTCATC 6960

ATCTTGAAAA AGAAGCAGAA CGTCAGAGAA CGGATCAATC TTTCTTTGTT CCAGTTGCTG 7020

AGATAAAGGA AAATGATTAT GATTTGTCTA TCAATAAATA TAAAGAGATT GAGTATGAAA 7080

AAGTTGAGTA TGAACCAACA GAAGTCATAT TAAAGAAAAT CAATGATTTA GAAAAAGAAA 7140

TTCAAGCTGG CTTGGCTGAA TTGGAAAAAT TACTCAAGTA GGGAGGTGGC TGTATGAAAA 7200

AAGTGAAGTT GGGGGAAGTC TTATCTCTAA AAAAAGGCAA GAAAGCCACT GTACTTGCTG 7260

AACAAACAAC TCTAAGCCAA CGTTATATTC AAATAGATGA TTTAAGAAAT AATAATAATT 7320

TAAAATTCAC TGAAAGTTTA AATATGACTG AAGCACTCCC AGATGATATT CTGATAGCAT 7380

GGGATGGAGC TAATGCAGGA ACAGTTGGTT ATGGATTATC GGGAGCTGTT GGTAGTACAA 7440

TTACGGTCTT AAAAAAGAAT GAGCGATACA AAGAAAAAAT TATATCAGAT TACTTGGGAG 7500

TCTTTTTGGA AAGTAAATCG CAGTATTTAC GAGATCATTC AACAGGTGCA ACAATTCCTC 7560

ATTTAAACAA GAATATATTA CTTGATTTAC AATTAGAATT GCTAGGTATC GAAGAACAAG 7620

AGAACATTAT CTGTATTCTT AATACGATTA AAAGGCTTAT TACTAAAAGA AAATTTCAGT 7680

TAGATGAACT AAACTTGCTC GTCAAATCCC GATTTAACGA GATGTTTGGG GAAAATAAAA 7740

TATTTGAAAG CATTGATAAC TTATTTGATA TTATAGATGG TGATAGGGGC AAAAATTATC 7800

CTAAATCAGA TGAGTTGTTT AGTGAGGAGT ACTGTTTATT TTTAAATACA AAGAATGTTA 7860

CTAAAAACGG ATTTTCATTC GATACAAAGC AATTTATCAC TAAAACAAAG GATAAATTAC 7920

TTCGAAAAGG CAAACTTGAG CGTTATGATA TAGTCTTGAC AACAAGAGGT ACTGTTGGAA 7980

ATGTAGCGTA CTACGATGAA TTAATAAAAT ATAAACATTT ACGTATAAAT TCAGGTATGG 8040

TAATATTACG TCCCAAGACA CCAAATCTAA ATCAGAAATT TATTATCCAT GTTTTAAGGA 8100

ATAATAATTA TAGTCGAGTG ATATCAGGAA GTGCTCAGCC TCAGTTACCA ATTACAAAAT 8160

TAAAAAAAAT ACTTCTCCCC CTCCCCCCAC TAGCCCTCCA AAATGAGTTC GCAGACTTTG 8220

TAGTCCAGGT CGACAAATCA CAATTTGCTT GTGAGATAGC TATAAAAGTG TGGAGAAATA 8280

GCTTGAAATT TAGTATAATA TAGCTAAACT ATTTGTTTAA AGTGAGAAAA AAATGGGAAA 8340

TTTTAGCTTT CTTTTAAAAA ATGACGAATA TGAATCTTTT TCAAAACCTT GCATTGAAGC 8400

TGAGAATATG ATTGCTACAT CAACTGTGGC TACTGCCTTT ATGGCGCGTC GTGCTTTAGA 8460

GCAGGCTGTC CATTGGATAT ATAGTCACGA TTCATATTTA GAAGCTCCCT ATCGTGCTAC 8520

TCTATCTTCT TTAGTATGGG ATGATGATTT TAGGGATATC GTAGATTCTG AACTCCACAA 8580

GCAGATAGTT CTGTTGATTC GGTGGGGAAA CCATGCTGCT CATGGTGGTG AAATTAAGGA 8640

ACGAGAAGCG ATTTTAGCTT TGCATCATTT GTATCAGTTT GTTAATTTTA TCGATTATTG 8700

TTACAGCAAT GAGTTTGTGG AGCGTTATTT TGATGAGAAG TGCTTACCAC TTTCAGCAAA 8760

CATCAAATAC CGAGAAACTC CACAATCTAT GATAAAGTTA CAAGACAGTT TACCAGAACT 8820

GCCTGATTTT CATGAACAGA TGGCTGCTCA GTCCGTAGAA GTTCAAGAGA CTTATACTGA 8880

AAAACGTGAG ACTGCAGCGC AACGGCAAGA TGTGCCTTTC CATATTGATC AATTATCTGA 8940

GGCAGAGACA AGAAAGCTCT TTATTGATAT CGATCTCCGT TTAGCAGGAT GGATATTTGA 9000

AGAAAACTGT CGTGTTGAGA TAGCCGTTGA TGGTCTCAAG CACGGTTCAG GAATTGGTTA 9060

CTGTGACTAT GTACTTTATG GTAAAAATGG GAAAATTTTA GCGATTGTGG AGGCTAAAAA 9120

AGCCTCTGTC AATCCAGAAG TAGGGGAAGT ACAGGTCAAA GAATATGCTG AAGCTTTGGA 9180

GAAACATATC GGCTATCAGC CAATTTGCTT TATTACAAAT GGGTTGAAGC ACTATATACT 9240

TGATGGTCCG AACCGCCGCC AGATTGCAGG CTTTTACTCT CAAGAAGAAT TGCAATTAGT 9300

GATGGATAGA CGTCATCTTC AAAAACCGCT TGAGGATATT TCTAGTAAAA TTAGGGACGA 9360

TATTTCCGGG CGTCACTACC AAAAACATGC CATTGCAAGC GTTTGTGAAG CTTTCTCTGA 9420

TCATCGTAGA CAGGCACTTT TGGTTATGGC AACTGGGGCG GGGAAAACTC GTACAGCAGT 9480

TTCTCTAGTT GATATCTTAT CACGTCATAA CTGGGTAAAA AACGTTCTCT TCTTAGCCGA 9540

TAGAACTTCC TTGGTTAAGC AAGCATATGA TTCGTTTAGA AAATTACTCC CAGATCTTTC 9600

CGTTTGTAAC TTCTTAGAAG ATAAAGAAGG AGCTCAATCA AGTCGCATGG TCTTTTCAAC 9660

TTATCCGACC ATGATTGGAG CGATTAGTGG TCAAGAAGAA GTAAATCAAC GCCCTTTCAC 9720

TGTTGGGCAT TTTGACCTTA TCATAATTGA CGAATCTCAC CGTTCTATTT ATCAGAAATA 9780

CAAGTCCATT TTTGATTATT TTGATGCAAG AATTGTAGGC TTAACAGCTA CTCCGCGTCA 9840

AGATTTAGAT AAAAACACCT ATGGATTCTT TAATTTGGAG AATGGGGTTC CAACATATGC 9900

ATATGATTTG GAAGAGGCTG TTAAAGACGG ATATTTAGTA GCCTATCATT CTATCGAAAC 9960

CAAACTGAAA CTACCTACGG ATGGTCTACA TTATGATGAT TTGTCCGAAG AAGAAAAGGA 10020

ACATTTTGAT AGCAAATTTG AAGACAATAG CTGTGAAAAA GATATTGATG GGAGTGTATT 10080

TAATTCCTTT ATTTTCAATA AAAGTACAGT AGAAATTGTT TTAAATGAAC TCATGACAAG 10140

AGGAATTCAG ACAGCCTCGG GTGATGAAAT TGGTAAAACT ATTATTTTTG CTAAAAATCA 10200

TGATCATGCG GAATATATCA GAGGTATTTT TAACAACCGC TATCCTGAAA AAGGGAGCGA 10260

CTATGCTCAG GTGATTGATT ATAGTATTAA GCATTATCAG ACCTTGATTG ATGATTTTAA 10320

AATTAAGGAG AAGTATCCTC AAATTGCGAT TTCTGTCGAT ATGTTAGATA CAGGTATTGA 10380

TGTACCAGAG GTTGTTAATT TAGTCTTCTT CAAGAAAGTA CGCTCTAAAA CTAAGTTTTG 10440

GCAGATGATT GGTCGAGGAA CCCGTCTATG TAAAGATTTA TTTGGACCTG AGCAGGATAA 10500

GGAAAACTTC TTGGTATTTG ATTATGGGGA CAATTTTGAT TATTTTCGTG CAGATCCAAG 10560

AGATGGAGAG GGTCGTCACA TTGTTTCGCT GACTCAGCGT TTATTTAATA TCAAAGTGGA 10620

CTTGATTCGA GAACTTCAGG GACTCCAATA CCAAGAAGAT CAGTTTGCGA GAGCATACCG 10680

TCAGCAGCTT GTCTCGGAAC TTCAAGGTCG TATAGAGAGC TTAAATGAGT TGGACTTCAG 10740

GGTTCGTATG GTTTTAGATA CAGTTTATAG CTATAGGAAA TTGGAAAGTT GGCAGAATCT 10800

AACTGCTGTT ACAAGTGAAA CCATTCAAAA AAATCTCTCT CCGCTTTTAT TTGATGAAGA 10860

TAAAGAAGAT GAGATGGCGA GGAGATTTGA TTTGTGGTTG CTTCATATTC AGTTGGGGCA 10920

ACTGACAGCT AAATCTTCCA CTGTTCATAT TTCCCAAGTG ATGAAGACGG CTAGAGCTCT 10980

TTCTGCTATT GGCAATATCC CGCAGGTTTT TGAGCAGGCT GAAATTATCA GGAAAGTACA 11040

GGAGCCTGAA TTTTGGAAAG AAGTTAACTT GTCTGATTTG GAAAAAATTC GTCTTGCTAT 11100

TCGAGATTTA TTACAGTTTT TGGATAAAAC AGACCGTAAA CCCTACTATG TTAACTTTGA 11160

AGATCGTATA CTCTCCACTG TTCACGAGAC CACAGCATTT TTGCAGGTCA ACGATCTTCG 11220

GTCTTACAAT GAAAAAGTTG AGCATTATTT GAAAACTCAT CTGGATGAGG AGTCCATTTC 11280

TAAGCTATAC CATAATAAAA AGTTGACATC TGATGATATG CTTGCACTTG AAAAATTGCT 11340

TTGGGAAAAA TTAGGTAGTA AAGCAGACTA CCAAAGTCAT TATGAAAATA AGGCAATTCC 11400

GAGATTGGTT CGTGAGATTA TTGGCTTAGA TAGAGAGTCT GCCAATCGTA TTTTTTCTAA 11460

ATTTTTGTCG GATGAGAATC TTAATGCCAG GCAGATTTCA TTTGTAAAAT TGATTGTAGA 11520

CTACATTGTA GAAAATGGTT TTTTAGAGAC GAAAGTGTTA ACGCAAGAGC CGTTTAAATC 11580

TTATGGTTCT GTTCAACTAC TCTTCCAACA CCAACTACCA GTACTTCGTA ATATTGTTCA 11640

AATCATTGAA CTTATCAATA ATCGAGCTGG AGAAGCGGCT TAAATTCTAA AGTGATTGCC 11700

ATGCTGAGAC TCATTTAAAA TTAAAAAGAG TAGAAATTTA TGCTATATAT GAGAAGTTTT 11760

ATTAGGAAGA ATGTCATCGT TTTCCTAGAA TACAGTATCA GTTGTTAAGT GGTTGATAAA 11820

TTTCAAAGTA GATACTTGTA CCACGATGTT TGTTGATCGA GTTATTAACA AAAGAGCTAC 11880

TTTGATTTTA AAGAAATAGA AAACAAAAAG CCGAGCAAGA ATTCAATTGC AGGAGAAAAT 11940

GAAATAATAC TCAATGAAAA TCAAAGAGCA AACTAGGAAA CTAGCTGCAG GCTGCTCAAA 12000

ACACTGTTTT GAGGTTGCAG ATGGAAGCTG ACGCGGATTG AAGAGATTTT CGAAGAGTAT 12060

AAATCTTCCT AGGATAAAGC AAAACGCATA GTATCAAGGG TTTTCAACAC TTGATACTAT 12120

GCGTTTTCTG ATGTTAAAGA CTTTCTACCA GGTTTTTTAA AAGCATAATT GTTAGTTGTA 12180

GTCATTTATT ATTCTTCAAA GAAAAATGGT GGGGCGAATT TTTTCAGTTC TTCAAAGCAC 12240

TTTTGAGCAG TATCTGCATC TTCACAGATG ATAAGACAGA CATCATTACC ACAAAGGGTA 12300

GCGATAGCGT CAGGGAAGCT CAAAGTATCA ATGATAGAAC CAAAGGATTG AGCCAGTCCA 12360

GGAAGGGTTT TTAGTAGGAC TTGGTGTTGA ACTGGGCGCA TCCAGACAAG GGCGTCTTCC 12420

ATGTAGAGTT CGAGACGTTT TTCCCATTTT GAGATGGAAC CATTGTTAAG AACATAATAA 12480

GCGCTATCTT CTTCGCGGAC TTTTGATAGG TTCATATTTT TGATGTCGCG TGAGAGGGTT 12540

GCCTGGGTTA CTTGAATGTC GTTCTCAGCA AGAAGGGCTT GCAACTCAGC CTGTGTATGA 12600

ATCTTGTTTT TTGTGATAAG AGCGCGTATA AGTTGGTGGC GGTGTTCTGA TTTATTCATA 12660

ATAATGTAAC TCCTTTTAGC AAGGTAAGGT AAGCATGGAC TGAGCGAGGT CGACAGTCAA 12720

GTGGTAGTCT GTATTGTCAC GGATGGTGAT TTCAAAGTCA GTAGTATAGA GGACTAAACG 12780

GAGAGTGTCT CCTTCTTTTA GCTTGTAAAT AGTTGGCTGC AGTTCAAATT GAACGTCCAT 12840

CCATTCATCT GCAGTAATAT CCTCTACTAA CAGTAAATCA TTTCTATTTT GTAAATTAAG 12900

GTAACCTTTT GTCACGACTC GTTGTGCCTC TGGTCTAAAT GGCAATTCAC AGAGATTTTC 12960

CAACATGTGA TAGCGACCGT TGTCAATGGT TCTAGCACTT AAAATAGCTG GATAAGGTTG 13020

TAGGTATTTC TTTTGCCCAA ATTCTAGCAG TTGGGCAGAT AAGAGCCCCT TGTTTGTACT 13080

GGATTTGATA CGAAGATTGA GCTGAGCGCG ACCGTTTAGG TGGAGATCTT TAGTCACAGG 13140

AAGGTTAATA GTAATCTGAT TGGCTTTCCC TTGATAGAGC TCTGTATTGA AGGTTTGGTA 13200

TGTCTTACCA TAGCGCTCAA AATCCTTATC TGGGTACTGG TTTTGAATAG CTTGCTCTTC 13260

TTGACCAAGT GAGAAGGTTT CACAGTTTTC TTGCCCACCG AAGTTATCAA GTGATAACCA 13320

AGTCTGTGGA GCTGTATTGT CCTGCCAGAT AACAGTAGGA AGTTGAAAGT CTGTTTCCTG 13380

TCCTAGTAAT TTCTTGGTCA ATAAGGCATT TATGGACTCA CGGAAGTCAA TTGATTGCCA 13440

ATTGTTCATG TAAACATGGG CACCATTATG GAAAAAGAGA TGCTTGTGTA TATGAGTAGG 13500

AAGAGCATGG AACATCTGGT AAACATGAAG TGGTTTGACA TTCCAATCCT GAGAACCATG 13560

AGTAAAGACA ACCTCTGCCT TTACTTTATG GGCATTGAGC AGATAATTGC GGTCATGCCA 13620

AAACTGATTG TAGTCCCCAG TTTTTCGGTC TAGCTGAGCT TTCACTTTTT CTAAGTCAGC 13680

TTGGTGAGCT TCATTGCCAC GGATATAGTC GCCAGCTAAG AGATTACGAG AATAGGTTAA 13740

CTCAGCAAGG GAGTCAAAGT CCTCACCTGG ATAACCACCT GGGCTAGTCA CCAGACCGTT 13800

TTCACGGTAG TAGTTGTACC ATGATGAAAT TCCTGCCTCG GCAATGATAA CTTCTAAACC 13860

ATCGACTCCT GTAGTCGCAA GACCATTGGA CATGGTACCT AGATAGGAAA GTCCTGTTGT 13920

AGCAACTTTT CCGTTTGACC AATCAGCCTT GACTTGACGC TGGCGCGTGT GATCAGTAAA 13980

GGCACGGCAA CGACCGTTAA GCCAATCGAT GACATTTTTA TAAGCCTCGA TTTGCTGGTA 14040

GTCTCCATTA GTCATGAAAC CTGTCGAGTC TTTGGTACCA ACACCTGAGA CATAGAGATT 14100

GGCAAAGCCT CTCGGAAGGA AGTAGTCGTT TAGTGTATAG CTAGAGTTGA TGTGAGTTAG 14160

CTTTTCCTCA GCCTCTGCTA TAAGCTCAGC TTTACCTTGG GGTTGGACGA GATTTAGTTG 14220

AGGTTTCTCT AGCTCAATCT TGTGAGGAAG CTTAACCTCA AGCTCGCCCT CCATCTTGTA 14280

GAGAGCCTTG TCACTAGCCT TGTCATTGGT TCCCTGATGA TAAGGGCTGG CTGTCATGAT 14340

GGCAGGGATT TTTCCATCAA AACGAGGGCG AATAATGCTA ACCTTTACTA GGTCTGATAG 14400

CCCTTTTTGG TCAGTATCGA CACGAGACTC AACGTAAACG ACTTCACGAA TGACATCCTG 14460

GTTAGAAAAA GTAGCCAAAC TCTTGCCGTT AAAGTAGTGG TAGTCATTAT CCTCCGGAAT 14520

AAGACCATCA CTAACAAGTT GGTCGATAAG AGTATTTCCT TTTTTGGTGC GAGTATTGAG 14580

TAACTGATAG AGATTTTCAA TCAAGTCACC ATATATAATG GGAAATCCAG TTTCTTTACG 14640

AAAAACGTCA CTATCTTCGA AGTCAACCAA ATAAGAAAAG CCTAAAAGTT GAAAAGCAAC 14700

AGTATAAAAA ATATCTGCTG TCAGTTCATC TTCTGATTGA AAAAATGTCA GCAGGTCTGT 14760

TTTTTTATCA GCTGCTAGGA TAGAAAGTGG GTAGTTGGTG TCTTGATAAG TGAAAAAGAA 14820

ACGACGTAAA AAGGTTTCAA GTGAGTCTTT GTGATTGGCT GTATTTTGTA AATCAAAGCC 14880

ACATTTTTTT AGTTCAGATA AGACATTTTC TTTTGGAAAA TTGATATAAC TATATTGATT 14940

AAAACGCATA GAACCTCCAT ATAGAATGAC AGTTAAGGTT ATTATATCAA AAAAAAAGCA 15000

GAAAGGGAAT TGTTAACTTC AAAAGGAAAT AATCCAATAA AAATGAATAA AGTACTAAAT 15060

TCAATATAGA GAACAGAGTA ACAATAAGAA TAAATAGATA GGGTATAAAA GTTCTAGGAG 15120

ATTTATATTA TATGCTTTCT ATTTTTATAT ACAATATAGT ATAAATATAA AAATGATGAC 15180

AAAAATACAA ATGAATAGAA AATAAATTAG TAAGCTGATG AAATTTTTCT CAAGAGAAGC 15240

CATTTATAGG TGAAAATGGT ATAATATAGT GAGAAGGATA GAGGAGAAGT GTAAATTGAT 15300

CGCACAACTA GATACAAAAA CAGTCTATAG TTTTATGGAA AGCGTCATTT CGATCGAAAA 15360

GTATGTGAGA GCAGCTAAAG AATACGGCTA CACTCATTTG GCTATGATGG ATATTGACAA 15420

TCTTTATGGC GCTTTCGACT TTCTAGAGAT TACAAAAAAA TACGGCATTC ATCCTTTGCT 15480

AGGGCTTGAA ATGACAGTGT TTGTAGATGA TCAGGGAGTG AATTTGCGCT TTTTAGCTCT 15540

ATCTAGTGTG GGCTATCAGC AGTTGATGAA GCTTTCGACA GCCAAGATGC AGGGGGAGAA 15600

AACTTGGTCA GTCCTGTCCC AGTACCTGGA GGATATCGCG GTCATTGTGC CTTATTTTGA 15660

TAGAGTTGAG TCGTTAGAAC TAGGCTGTGA TTACTATATA GGGGTTTATC CAGAAACACT 15720

AGCAAGCGAA TTTCATCATC CTATCTTACC TCTTTATCGG GTCAACGCTT TTGAAAGCAG 15780

GGATAGAGAA GTTCTTCAAG TTTTAACAGC GATTAAAGAA AATCTACCGC TCAGAGAAGT 15840

TCCCTTGCGT TCGAGACAAG ATGTCTTTAT ATCAGCAAGT TCTTTAGAGA AACTATTCCA 15900

AGAGCGTTTT CCGCAAGCTT TGGACAATTT AGAAAAGCTT ATTTCAGGCA TTTCTTACGA 15960

CTTGGATACT AGTCTGAAAC TGCCTCGTTT TAATCCAGCT AGACCAGCAG TAGAGGAGTT 16020

GAGAGAGCGT GCTGAACTGG GGCTTGTTCA GAAGGGGTTG ACTAGTAAAG AATATCAAGA 16080

TAGACTAGAC CAAGAATTGT CTGTTATTCA TGATATGGGC TTTGATGATT ATTTCTTGGT 16140

TGTTTGGGAT TTGTTGCGTT TTGGACAATC GAATGGCTAT TATATGGGAA TGGGAAGGGG 16200

TTCTGCAGTA GGCAGTTTGG TTTCTTATGC CTTAGACATC ACGGGGATTG ACCCAGTAGA 16260

GAAAAATCTG ATTTTTGAAC GCTTTCTTAA TCGTGAACGC TATACCATGC CTGATATTGA 16320

TATTGATATC CCAGATATTT ATCGTCCAGA TTTTATCAGA TATGTTGGTA ATAAATATGG 16380

TAGTAAACAT GCGGCACAAA TCGTTACTTT TTCAACCTTT GGAGCCAAGC AAGCTCTTCG 16440

AGATGTCTTG AAACGCTTTG GTGTGCCAGA GTATGAATTA TCTGCAATTA CTAAGAAAAT 16500

CAGTTTTCGT GACAATCTTA AGTCGGCCTA TGAGGGAAAT CTCCAGTTTC GTCAGCAAAT 16560

CAATAGTAAG TTAGAATACC AAAAAGCTTT TGAGATTGCT TGCAAGATAG AGGGCTATCC 16620

AAGGCAAACC TCTGTCCATG CGGCTGGTGT TGTAATTAGT GACCAAGATT TAACCAACTA 16680

CATTCCTCTA AAGTATGGTG ATGAAATTCC ACTGACTCAG TATGATGCTC ATGGAGTTGA 16740

GGCTAGCGGA CTTTTGAAGA TGGACTTTCT GGGACTACGA AATTTGACCT TTGTCCAGAA 16800

GATGCAAGAG TTGCTTGCTG AAACAGAAGG TATTCATCTG AAAATTGAAG AAATCGATTT 16860

AGAAGACAAA GAAACGTTAG CTTTATTTGC CTCTGGTAAT ACAAAAGGTA TCTTTCAATT 16920

TGAGCAACCA GGTGCCATTC GTCTGCTTAA GCGTGTGCAA CCAGTCTGTT TTGAAGATGT 16980

CGTCGCGACT ACTTCTCTAA ATCGACCGGG TGCTAGTGAC TATATCAATA ATTTTGTGGC 17040

AAGAAAGCAT GGGCAGGAAG AAGTGACTGT TCTGGATCCA GTACTGGAGG ATATTTTGGC 17100

TCCAACCTAC GGCATAATGC TCTATCAGGA GCAGGTTATG CAGGTTGCCC AGCGACTTGC 17160

CGGATTTAGT CTTGGGAAAG CCGATATTTT GCGTCGGGCT ATGGGGAAAA AGGATGCCTC 17220

TGCCATGCAT GAGATGAGGG CTTCCTTTAT TCAAGGTTCA TTAGAAGCTG GTCATACTGT 17280

GGAAAAAGCA GAGCAGGTCT TTGATGTTAT GGAGAAGTTT GCAGGTTATG GTTTTAACAG 17340

GTCACACGCC TATGCCTACT CAGCCTTGGC CTTCCAGTTG GCTTATTTCA AAACGCATTA 17400

TCCAGCCATT TTTTATCAGG TCATGTTAAA TTCTTCCAAC AGTGATTACT TAATAGATGC 17460

ACTTGAAGCA GGTTTTGAAG TAGCCTCTCT ATCCATCAAC ACCATTCCCT ATCACGATAA 17520

AATTGCCAAC AAGGCCATCT ATCTAGGTTT GAAATCCATT AAAGGAGTCA GTAATGATTT 17580

AGCTCTCTGG ATTATTGAAA ATAGACCTTA TTCTAACATT GAAGATTTTA TAGCTAAATT 17640

ACCTGAGAAT TATCTGAAAC TTCCTCTGCT AGAACCTTTG GTAAAAGTTG GTCTTTTCGA 17700

TTCATTTGAA AAAAATCGTC AAAAAGTATT TAATAACTTA GCTAATCTAT TTGAATTTGT 17760

GAAAGAGTTG GGAAGTTTGT TTGGAGATGC TATTTATAGT TGGCAGGAAT CGGAAGATTG 17820

GACGGAACAA GAAAAATTTT ATATGGAACA AGAGCTTTTA GGGATAGGTG TCAGCAAACA 17880

TCCACTACAA GCTATTGCAA GTAAGGCTAT TTACCCGATT ACCCCAATCG GAAATTTGTC 17940

AGAAAATAGC TATGCTATTA TCTTGGTTGA AGTTCAGAAA ATAAAAGTGA TTCGTACCAA 18000

AAAGGGTGAA AATATGGCCT TCTTACAGGC AGATGATAGT AAGAAAAAAT TGGATGTCAC 18060

TCTCTTTTCA GACTTATATC GTCAGGTTGG ACAGGAAATA AAAGAGGGAG CCTTCTACTA 18120

TGTAAAAGGA AAAATACAAT CACGTGATGG CCGTCTGCAA ATGATTGCAC AAGAAATAAG 18180

AGAAGCAGTT GCTGAACGCT TTTGGATACA GGTGAAAAAT CATGAATCGG ATCAAGAAAT 18240

TTCACGCATT TTAGAACAAT TTAAAGGCCC AATCCCAGTC ATCATCCGGT ATGAAGAGGA 18300

ACAGAAAACC ATCGTTTCTC CCCATCATTT TGTAGCTAAA TCCAATGAAT TAGAGGAGAA 18360

ATTGAATGAA ATCGTTATGA AAACGATTTA TCGCTAAAAA TACGGAAAAT AGAAGAATTT 18420

TCAACGTAAA TGTGGTATAA TCAGTAAGAA TGTTAAAAGA AAAAGGAGCA TAACCAATAT 18480

GAAACGTATT GCTGTTTTGA CTAGTGGTGG AGACGCCCCT GGTATGAACG CTGCCATCCG 18540

TGCAGTTGTT CGTCAAGCAA TTTCAGAAGG AATGGAAGTT TTTGGTATCT ATGACGGATA 18600

TGCTGGTATG GTTGCCGGTG AAATTCATCC CCTAGATGCA GCTTCAGTAG GGGACATCAT 18660

TTCTCGTGGT GGTACTTTCC TTCACTCAGC TCGTTACCCA GAGTTCGCTC AACTTGAAGG 18720

GCAACTTAAA GGGATTGAGC AATTGAAAAA ACACGGAATT GAAGGTGTAG TTGTTATCGG 18780

TGGTGACGGA TCTTACCACG GCGCTATGCG TTTGACTGAA CATGGCTTCC CAGCTATTGG 18840

TCTTCCAGGT ACAATCGATA ACGATATCGT TGGTACTGAC TTTACAATCG GTTTTGACAC 18900

AGCGGTTACT ACTGCCATGG ACGCTATCGA TAAGATTCGT GATACATCAT CAAGTCACCG 18960

TCGTACTTTT GTAATCGAAG TTATGGGACG TAACGCTGGT GATATCGCTC TTTGGGCTGG 19020

TATTGCAACT GGTGCTGATG AAATCATCAT CCCTGAAGCA GGCTTCAAGA TGGAAGATAT 19080

CGTAGCAAGC ATCAAAGCTG GTTATGAATG TGGTAAAAAA CACAATATTA TCGTCTTAGC 19140

TGAAGGTGTG ATGTCAGCGG CTGAATTTGG TCAAAAACTT AAAGAAGCTG GAGATACAAG 19200

CGACCTTCGT GTAACAGAAC TTGGACATAT TCAACGTGGT GGTTCTCCAA CTGCGCGTGA 19260

CCGTGTTTTG GCGTCACGTA TGGGTGCACA TGCTGTTAAA CTTCTTAAAG AAGGTATCGG 19320

TGGTGTTGCG GTTGGTATTC GTAACGAAAA AATGGTTGAA AATCCAATTC TTGGTACTGC 19380

AGAAGAAGGG GCATTGTTTA GCCTTACTGC AGAAGGTAAG ATTGTGGTTA ACAACCCAGC 19440

TACAAA 19446

(2) INFORMATION FOR SEQ ID NO: 52:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16593 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

TCGTAAATAT GCTCTGTTTT TGGATTTTGT TTCTTAATCT GTTTGGCAAG TGCCTTCATC 60

ATAGAAATAG GACCACACAT ATAGACGGTT GCATGTTCGG GCACTTCTTT TTGTTCAAAA 120

TTAAGATAGC CGTCTTTCGT ACTGTCGATT AGATGGAGTT CAAAATTAGG ATTTTTCTGA 180

GCATAGTTAC GGAGTAAATC TAGGTAGACT GCATTTTCAT CTCCACGGAA GCTATAGTAG 240

AAGTGAACCT GTTTATCTAA AATAGGATGT TCACGGATGT AAGAGATGAA GGGGGTGATC 300

CCAATACCTC CAGCAATCCA AACCTGATTT TCTCGTCCTT CTTCTATGAT CATGTGTCCG 360

TAAGCTCTGT CTAGGGTTAC TTTGCTGCCG GCTTGAAGAT TATCATAGAT ATTCTTGGTA 420

TGGTCGCCTG AAGTTTTAAC AGTAAAGTAA AGAGTTTGAC CATGACCTCC TGAGATAGAA 480

AAGGGATGCG GAGCACTTTC AAAGCCTTCT TGGAAAATCT TTAGAAAGGC AAATTGTCCT 540

GATTGATAGT TGAAAGGTCT GCTAAGATGG ATTTGAATTT CTCTAGTATC GTGATTTAAG 600

CGTTTGAGAT GGGTAATTTT CCCTAGATAG GGGAAGGAAA TCTTTTGATA TAGAAAAATG 660

ATATAAAAAC CAGCTAGTAA GCCTAAAAGG GCATAGCTAC CAACAAGAAA ACTTAGAAGA 720

TTAAATGTAA GGAGACGATT GCCCATTATC ATGTAGATGT GAAAGAGTCC TAAAATATAG 780

GCTAGGTAAA CCAGGCGGTG AATCCATCGC CAAGCTTCGT ATTGGATGTA TTTGCCTAAA 840

TAGGCGACAA GGATGATGCT GGCAAAGATA TAGATGGCAA GATTGCCAAA CTGAGCAGCT 900

AAGCGAGAGC CCCACAAACC GCCCATACTA AAGTTATGAA AGATTAGTAG GATGATTGAG 960

AGAAAGGCTG TGAATTTGTG GACGGTGTAG ACCTTCTCCA AACTGTGAAA CCAGCTTTCT 1020

AGTAGTGGGA GACGAGTGGC TAGGATAAAA GTCAGAGATA GGCTTGTTAA AGCTAGTCCT 1080

GGAATCATGA ATTGGGGAGA AGTGTTCATC CAAGTCAAAA GAGTCAAGAT AAAACTAGCT 1140

ATGATAAAGA GTAGTCCTTT GACTGATTTC ATAGAAAATT CCATTTCATT TAGATTTCGA 1200

TTTGTTGTAA ATAAATTTGT TACATTTTAT CATAGAAAAT GTATGGTGTC AAATTGAGGT 1260

CTATAAATAT CTACTCTCAT CAAAAAACTC TCCAATTGAA CTGGAGAGTG GCTGTTTATA 1320

CTCAATGAAA ATCAAAGAGC AAACTAGGAA GCTAGCCGCA AGTTGCTCAA AACACTGTTT 1380

TGAGGTTGCA GATAGAGCTG ACGTGGTTTG AAGAGATTTT CGAAGAGTGT TATTCTGCAG 1440

CTTGTTGCCA ACGTTTGGCT AGCATATGAG ACAGGCTAGA AATTGCTAGG TTAAAGCTGA 1500

AGTAGATGAG GGCAATCAGG ATGTAAAGAC TGAAGACCTG CTCTGGTTCG AAATAACGGC 1560

CCATGAGAAT TTGGCTGGCT CCAAAGAGTT CTTGTAGGGC GATAACAGAG TAGAGGAGAC 1620

TGGTATCCTT AATCACGGTA ACAAACTGAG AAATGATGGC TGGTAGCATT TTGCGGATGG 1680

CTTGTGGGAG AATGATGTAG TAGAGGATTT GGGCTGAGGT GAAGCCTTGT GACATTCCTG 1740

CTTCGTACTG TCCCTTGTCT ACGGCATTGA GACCGCCTCG AATAATCTCA GCCAAGGCTG 1800

CTGATGTAAA GAGAGTAAAG GCTGTAATAC CTGCTGGTGT GGATTTCATT TTGAACACCA 1860

AAAAGATAGT AAAAATCCAG AGAAGGTTGG GAACGTTGCG CACAAACTCG ATATAAATAC 1920

TGGAAATAAT GCGTAAGACA GGATTTTTGC CATTTCTCGT GACAGCTAGC ACCGTACCGA 1980

TGATAGTAGA GAGGATGATG GCAATCAGAG AAATATAGAG GGTCAAGCCA AATCCTTTAA 2040

AGATAAAGAC TAGGTTATCT GGGGTTAAAA CTTCTAAAAT AGATTCCATA GTAACCTCCT 2100

AAAGTGAATA GGCTTTTTTG TTGGCTTGCT CCATCTTGCG ACCAAACTGG GCAACAGGGA 2160

AGCATAGAGC AAAGTAGAGA AGAGCAGCAC CTAAAAAGGC TGGTATATAG TTTCCGTTGA 2220

GAGCCGACCA AGACTTAGTC ACAAACATCA AGTCTACTCC AGAGATGATA GCTACAGTAG 2280

AGGTGTTCTT GATGAGGTTA ACAATTTGGT TGGTCAATGG AGGGAGAATG ATGCGGAAGG 2340

CCTGAGGCAA GATAATCAAG CGCATGGCAC TGATATAGGT AAAACCTTGC GACAAGGCGG 2400

CCTCCATCTG ACCACTAGGA ATAGACTGAA TCCCTGAACG AATAACCTCA GCGATATAAG 2460

CGCCGTGATA GAGTCCCACG CAGAGAACGG CTGTCCAATA AATTGGAATC ATGATGATAT 2520

GGTCACTGAT AAGAGGTAGG CCATAAAAAA CAATAACAAA CTGCACCAAG AGGGGAGTAT 2580

TTTGGTAAAA TTCAACAAAG ATGCGAGCTA AAATGCGTAA AATTGGACGT TTACTGGTTG 2640

ACATGGCACC AAAGAAGATG CCCAAAACCA TAGCGAGGAT AAAGGAACCA ACCGCTAGGG 2700

CAAGGGTGAA GAGGAAACCA TTGAAAAATT GTCCAAAATC CTGAAAATAG GCTGTCCAAG 2760

ATGATAAATC TGTCATGGGG TGTCCTCCTT AATCTGCAGT ATGGCTAGAT GGTTTGAGCT 2820

TGTAACGGTC ATAAAGTTTC TGCAAACTAC CATCCTTGCT CCATTTAGTA ACCAAGTTAT 2880

CAAGATAGTC GTTGAGCTCT GTATTTGATT TCTTGGTAAC AATACCGTAG TCAGATGGCT 2940

TGAAACTATC ATCTAGTAGT GCTGTCCGTT TACTAGTGTA GCCAGATAGA ATAGAGCGGT 3000

CAACGGAAAA GGTATCGATA CGATGAGCGT GCAGGGAAGT AATCAATTCT GGGTAGGAAC 3060

CAAGTTCGAC GAATTTAAAC TTCAGACCTT TCTTTTTACC CAGTTCAGTA ATCAGGCGTT 3120

GGGTGATAGA ACCTTGGGCG ACTCCGATGG TTTTGCCGTT TAGGTCCTCA ATCTTTTTGA 3180

TTTTGGCAGA TTTATTGACC AAAAATCCAG AAGCGTCTGT GTAGTAGGGA CTGGTAAAGT 3240

TGTAGAGTTT TTTGCGTTCG TCCGTGATGG TAAAGGTCGC GATATCCATA TCGACCTGTT 3300

CATTGTCTAG AAGGGGGCCG CGGGTTTGTG CTGTAACCGG CACATAGCGA ATCTTGACCT 3360

TGAGTTCATC AGCTACCATC TTGGCCAAGT CGGTTTCGAT ACCAGAATAA GTACCGGTCT 3420

TGGGATCTTT GTAACCAAAA TTGGGAACGT CTTGTTTGAC ACCGACAACC AGTTCGCCTC 3480

TTTTTTGAAT GTCTGCGATA CTTGTATCAG CCTGGACTGG TTTGGCAGCA GCAAGGCCGA 3540

AAAGGCTAAT CAATAATGCT GATAAAAAGA ATTTTTTTTC ATAGGCGCCT CCTTATTTGA 3600

CTTTGTCACT TTCGTGGTTG ATAATTTTGC TGAGGAATTG TTGGGCACGA GGTTCGCTTG 3660

GATTGTCAAA AAAGTTATCG ACATCTGTCG TATCTACTAA AACTTCTCCG TCGGCCATAA 3720

AGATAATGCG GTCCGCAACC TCTCGAGCAA AGCCCATTTC GTGGGTAACG ATGATCATGT 3780

TCATCCCATC ATGCGCCAGT TTCTGCATAA CTGCTAGAAC ATCTCCGATA GTCTCAGGAT 3840

CAAGAGCAGA TGTTGGTTCA TCAAAGAGGA GGAGTTCCGG ATGCATAGCA AGACCACGAG 3900

CGATGGCGAT CCGCTGTTTT TGTCCACCAG ATAGCATGGC GGGATAGGAA TCTTTCTTGT 3960

CCCACATATT TACAAATTCC AGATATTTTT GGGCGGTTTT TTCAGCTTCT TTTTTATCAA 4020

TTCCTAGAAC TTCAATGGGT GCAAGCGTTA CGTTTTCTAA CACAGCTTTG TGTGGATAAA 4080

GGTTAAAATG TTGAAAAACC ATGCCGACTT CCTTGCGAAG AGGTACCAAA TCTTTCTGGC 4140

TGGCACCAGC AACTTGGTGC CCATTGACTA GGAGACTTCC TTTGTCAACA GTCTCTAAAC 4200

CATTGATCGT ACGGATAAGA GTGGACTTCC CAGAGCCAGA AGGTCCAAGC AGGACAACAA 4260

CTTGTCCTTT TTCAAAACGG AGATTGATGT TGCGGAATGC GTGGTAGTCT CCGTAATATT 4320

TTTCGACGTT TTTAAATTCT ACTAAAGCCA TGAGAGATCT CTATTGTGTT ATATTTTATA 4380

ACACGGTTCT ACAATAAAAG AATGTTCTTG TCAAATCATA TCTGAAAAAA TTCACTATAG 4440

TGAAATAAGA ACAGGAAAAA TCGATCGGGA CAGTCAAATC GATTTCTAAC AATATTTTAG 4500

AAGTAGAGGT GTACTATTCT AGTTTCAATA TACTATAAAA TGTTATAAAA AAGCAATCTG 4560

GATAGAGAAA ACGTCTAAAT CATGTTATAA TGAAGCAATA GAATTCTTAG AAAGAGTGGA 4620

TGTCTTTTTG ATAACACCTA CTTATGAATG GCAGTTTGCC CTGCAGGTAG AAGATGCGGA 4680

TTTTACAAAG ATAGCCAAGA AGGCTGGACT GGGTCCTGAG GTGGCTCGGT TATTGTTTGA 4740

GAGAGGGATT CAGAACCAAG AAAGTCTGAA GAAGTTTTTA GAACCTTCCT TGGAGGACTT 4800

ACATGATGCT TATCTGCTCC ATGATATGGA CAAGGCAGTG GAGCGGATTC GTCAGGCTAT 4860

TGAAGAAGGG GAAAATATTC TTGTTTATGG AGACTATGAT GCGGATGGCA TGACTTCGGC 4920

TTCTATTGTG AAGGAAAGTT TGGAACAACT TGGTGCTGAG TGCCGAGTTT ACCTGCCAAA 4980

TCGTTTTACC GATGGCTATG GCCCTAATGC TAGTGTTTAT AAATACTTTA TCGAGCAAGA 5040

AGGGATTTCC TTGATTGTGA CGGTGGACAA TGGGGTTGCT GGTCATGAGG CTATTGCATT 5100

GGCTCAGTCT ATGGGAGTAG ATGTCATTGT GACAGACCAT CATTCCATGC CTGAAACCCT 5160

GCCAGATGCT TATGCTATTG TCCATCCTGA ACATCCAGAT GCGGATTATC CTTTTAAATA 5220

TTTGGCTGGT TGTGGAGTTG CTTTCAAGTT GGCTTGTGCC CTGTTAGAAG AAGTGCAAGT 5280

GGAATTGCTT GATTTGGTCG CTATTGGAAC TATTGCAGAT ATGGTGAGTC TGACGGATGA 5340

AAATCGTATC TTAGTTCAAT ATGGTCTGGA AATGTTGGGT CATACCCAGC GCATTGGTCT 5400

GCAAGAAATG CTGGACATGG CTGGGATTGC TGCCAACGAA GTAACAGAAG AAACGGTTGG 5460

TTTCCAGATT GCTCCTCGTT TGAATGCCTT GGGTCGCTTG GATGATCCCA ATCCTGCCAT 5520

TGATTTGTTG ACTGGATTTG ATGATGAGGA AGCGCATGAG ATTGCCCTTA TGATTCACCA 5580

GAAAAACGAA GAGCGCAAGG AAATCGTTCA GTCTATCTAT GAAGAAGCCA AGACCATCGT 5640

GGATCCTGAG AAGAAGGTTC AGGTCTTGGC CAAGGAAGGC TGGAATCCTG GGGTTCTAGG 5700

AATCGTGGCT GGTCGTTTAT TGGAAGAATT GGGACAGACA GTCATTGTTC TTAATATAGA 5760

AGACGGTCGT GCCAAGGGCA GTGCTCGTAG TGTGGAAGCG GTCGATATTT TTGAAGCTCT 5820

GGATCCCCAT CGAGACCTCT TCATCGCCTT TGGAGGTCAT GCAGGTGCAG CGGGTATGAC 5880

GCTGGAAGTT GAGCAACTCT CAGATTTATC TCAGGTTTTG GAAGATTATG TTCGTGAAAA 5940

AGGTGCAGAT GCTGGTGGCA AGAATAAGTT AAACCTAGAT GAAGAGTTGG ATTTGGAGGC 6000

ACTTAGCTTG GAAACGGTCA AAAGTTTTGA ACGTTTAGCT CCTTTTGGAA TGGATAATCA 6060

GAAACCTATT TTTTATATCA AGAATTTTCA GGTCGAAAGT GCTCGTACTA TGGGGGCAGG 6120

TAATGCCCAT CTAAAGCTGA AAATTTCCAA GGGTGAGGCG AGTTTTGAAG TGGTAGCCTT 6180

TGGTCAAGGC AGATGGGCGA CAGAGTTTTC TCAAACCAAG AATCTAGAGT TAGCGGTTAA 6240

ATTGTCTGTC AACCAATGGA ATGGCCAAAC TGCCCTCCAG TTGATGATGG TGGATGCGCG 6300

AGTGGAAGGT GTTCAACTTT TTAACATTCG TGGAAAAAAT GCAGTCTTGC CAGAAGGTGT 6360

TCCAGTCTTG GATTTTCCTG GAGAACTGCC AAATCTTGCG GCTAGTGAAG CTGTTGTCGT 6420

AAAAAACATT CCAGAGGATA TTACTCAGCT GAAGACCATT TTTCAGGAAC AGCATTTCTC 6480

TGCTGTCTAT TTCAAAAATG ATATTGACAA GGCTTATTAT CTGACAGGTT ATGGGACTAG 6540

AGATCAGTTT GCCAAATTGT ACAAGACTAT TTACCAGTTC CCAGAGTTTG ATATTCGCTA 6600

CAAGCTGAAA GATTTGGCTG CATATCTTAA TATTCAACAA ATCTTGCTGG TCAAGATGAT 6660

TCAAGTATTT GAAGAACTAG GCTTTGTGAC GATAAAAGAT GGTGTGATGA CAGTCAATAA 6720

AGAGGCGCCA AAGCGGGAGA TAGGAGAAAG TCAAATTTAC CAAAATCTCA AACAAACCGT 6780

TAAAGACCAA GAAATGATGG CGCTGGGTAC GGTGCAAGAA ATTTATGATT TTTTGATGGA 6840

AAAAGAGTAG AAGTTAGGAA AGAGTTGGGA AATCAACTCT TTTTTGAAAA CAGACCTTCA 6900

TTTTGAAAAT CATCAAAAAA ATGGTATAAT GGTAGGAAAA GATTCGGCTG AAAGTATCAG 6960

AACTTTTAGA ATAAGAGGGT AGAATTGCCC TATAATCAAG ATAAACTAAG ATTTTGGAGG 7020

AAAAATGAGT AATATCAGTT TAACAACACT TGGTGGTGTG CGTGAGAATG GAAAAAATAT 7080

GTACATTGCT GAAATTGGAG AGTCCATTTT TGTTTTGAAT GTAGGGTTAA AATATCCTGA 7140

AAATGAACAA TTAGGGGTCG ATGTGGTGAT TCCAAACATG GATTACCTTT TTGAAAATAG 7200

CGACCGTATT GCTGGGGTTT TCTTGACCCA CGGGCATGCG GATGCCATTG GTGCTCTACC 7260

GTATCTCTTG GCAGAGGCTA AAGTTCCTGT ATTTGGGTCT GAGTTGACCA TTGAGTTGGC 7320

AAAGCTCTTT GTCAAAGGAA ATGATGCCGT TAAGAAATTT AATGATTTCC ATGTCATTGA 7380

TGAGAATACG GAGATTGATT TTGGTGGGAC AGTGGTTTCC TTCTTCCCTA CGACTTACTC 7440

CGTTCCAGAG AGTCTGGGAA TTGTCTTGAA GACATCGGAA GGAAGCATCG TTTATACAGG 7500

TGACTTCAAA TTTGACCAAA CGGCTAGTGA ATCTTATGCA ACTGATTTTG CTCGTTTGGC 7560

AGAGATTGGT CGTGACGGCG TCCTGGCTCT CCTCAGTGAT TCGGCCAATG CAGACAGCAA 7620

TATTCAGGTG GCTAGTGAAA GTGAAGTTAG GGATGAAATT ACCCAAACTA TTGCTGACTG 7680

GGAAGGTCGT ATCATCGTTG CAGCTGTTTC CAGTAATCTT TCTCGTATTC AGCAGATTTT 7740

TGACGCTGCG GATAAAACAG GTCGACGTAT CGTCTTGACA GGATTTGATA TTGAAAATAT 7800

CGTCCGCACA GCGATTCGTC TTAAGAAGTT GTCTTTAGCC AACGAAATTC TTTTGATTAA 7860

GCCTAAAGAT ATGTCTCGCT TTGAAGACCA TGAGTTGATT ATTCTTGAGA CAGGTCGTAT 7920

GGGTGAGCCT ATCAATGGAC TTCGTAAGAT GTCGATTGGT CGCCATCGTT ATGTAGAAAT 7980

CAAGGATGGG GACCTAGTCT ATATTGCTAC GGCTCCGTCT ATTGCTAAAG AAGCCTTTGT 8040

TGCGCGTGTG GAAAATATGA TTTATCAGGC AGGTGGGGTT GTCAAATTGA TTACCCAAAG 8100

TTTACATGTA TCAGGGCACG GAAATGTGCG TGATTTGCAG CTGATGATCA ATCTTTTGCA 8160

ACCTAAGTAC CTCTTCCCTG TCCAAGGGGA GTATCGTGAG TTGGATGCTC ACGCTAAGGC 8220

TGCCATGGCA GTTGGGATGT TGCCAGAACG CATCTTCATT CCTAAAAAGG GGACGACCAT 8280

GGCTTACGAG AATGGAGACT TTGTTCCAGC TGGATCGGTT TCAGCAGGAG ATATCTTGAT 8340

TGATGGGAAT GCCATTGGTG ATGTTGGAAA TGTTGTTCTT CGTGACCGTA AGGTCTTGTC 8400

AGAGGATGGA ATTTTCATCG TGGCTATTAC AGTCAACCGT CGTGAGAAGA AAATTGTGGC 8460

TAGGGCTCGT GTTCACACGC GTGGATTTGT TTATCTCAAG AAGAGTCGCG ATATTCTCCG 8520

TGAAAGTTCA GAATTGATTA ACCAAACGGT AGAAGAGTAT CTTCAAGGAG ATGACTTTGA 8580

CTGGGCAGAT CTCAAAGGTA AGGTTCGTGA CAATCTGACC AAGTACCTCT TTGATCAAAC 8640

CAAGCGTCGC CCAGCCATTT TACCAGTAGT CATGGAAGCA AAATAATCGT TGAAATAAAC 8700

AGAGAGAAAG TCGAGTTTCG GCTTTTTCTT ATAGAAAAAT AGAAGGAGAA AATCATGGCA 8760

GTGATGAAAA TCGAGTATTA CTCACAAGTA TTGGATATGG AGTGGGGGGT GAATGTCCTC 8820

TACCCTGATG CCAATCGAGT GGAAGAACCA GAGTGTGAAG ATATTCCCGT CTTGTACCTT 8880

TTGCACGGGA TGTCTGGAAA TCATAATAGT TGGCTTAAGC GGACCAATGT AGAACGCTTG 8940

CTTCGAGGAA CTAATCTCAT CGTTGTTATG CCCAATACCA GCAATGGTTG GTACACCGAT 9000

ACCCAGTATG GTTTTGACTA CTACACGGCT CTAGCAGAGG AATTGCCACA GGTTCTGAAA 9060

CGCTTCTTCC CTAATATGAC GAGCAAGCGT GAAAAGACCT TTATCGCTGG TCTTTCTATG 9120

GGAGGCTACG GCTGCTTCAA ACTGGCTCTT ACGACAAATC GTTTTTCTCA TGCAGCTAGT 9180

TTTTCAGGTG CCCTCAGCTT TCAAAACTTT TCTCCTGAAA GTCAAAATCT GGGAAGTCCA 9240

GCCTACTGGA GAGGTGTTTT TGGAGAGATT AGAGACTGGA CAACTAGTCC CTATTCTCTT 9300

GAAAGTCTGG CTAAAAAATC GGATAAAAAG ACCAAACTTT GGGCGTGGTG TGGCGAACAG 9360

GATTTCTTGT ACGAAGCCAA TAATCTCGCA GTGAAAAATC TCAAAAAACT AGGTTTTGAT 9420

GTGACCTATA GCCATAGCGC TGGAACTCAC GAGTGGTACT ACTGGGAAAA ACAATTGGAA 9480

GTTTTTTTAA CAACCCTACC AATTGATTTC AAATTAGAAG AGAGACTGAC TTAGTTTGAA 9540

CTTCAGCATA GGGGGAGTAG AACTAAAATA AAATATGTTT TCACTAGACT TTTCAAACGm 9600

AAGTAGTAGA ATAGTAATAA AATACTGGAG GAAAGAGAGT AGGAAATGTA CCGTTATCAA 9660

ATTGGCATTC CCACATTAGA ATATGATCAG TTTGTCAAAG AACATGAATT AGCCAATGTA 9720

TTACAAAGTA GTGCTTGGGA GGAAGTTAAG TCTAATTGGC AACATGAGAA GTTTGGTGTT 9780

TACAGGGAAG AAAAATTACT GGCGACAGCT AGTATTTTGA TTAGAACTCT TCCGCTAGGC 9840

TATAAAATGT TTTACATCCC AAGAGGACCT ATATTGGATT ATGGGGATAA AGAACTCTTG 9900

AATTTTGCCA TTCAGTCTAT TAAGTCCTAT GCTCGCAGTA AGAGAGCGGT TTTTGTGACT 9960

TTTGACCCAA GTATTTGCCT ATCTCAAAGT TTAATCAATC AGGAAAAGAC AGAATTTCCT 10020

GAAAATCTGG CTATTATTGA TAGTTTGCAA CAAATGGGAG TAAGGTGGTC AGGAAAAACG 10080

GAGGAAATGG GAGACACCAT TCAACCTCGT ATTCAGGCGA AAATATACAA GGAAAATTTT 10140

GAAGAAGATA AACTTTCCAA GTCAACAAAA CAGGCTATTC GAACAGCACG AAACAAAGGG 10200

CTTGAGATTC AATATGGTGG ACTGGAACTA TTAGATTCAT TTTCGGAGTT GATGAAAAAA 10260

ACTGAGAAGC GAAAAGAGAT TCATTTGAGG AATGAAGCCT ATTATAAAAA ATTGTTAGAT 10320

AATTTTAAGG ACAAGGCCTA TATCACCTTG GCCACCTTGG ATGTTTCTAA ACGTTCGCAA 10380

GAGTTAGAAG AACAGTTAGC GAAAAATAGA GCCTTGGAAG AGACCTTTAC TGAGTCGACT 10440

CGAACTTCAA AAGTAGAAGC GCAGAAGAAG GAAAAAGAAC GTTTGTTAGA GGAATTGACC 10500

TTCTTGCAGG AATATATAGA TGTAGGTCAA GCGAGAGTTC CTTTAGCGGC TACTTTGAGT 10560

TTGGAATTTG GTACTACCTC TGTCAATATA TATGCTGGTA TGGATGATGA TTTTAAACGT 10620

TACAATGCAC CAATTTTAAC TTGGTATGAA ACGGCTCGCT ATGCCTTTGA ACGAGGTATG 10680

ATCTGGCAAA ATTTAGGTGG TGTTGAAAAC TCTCTCAATG GTGGACTTTA TCATTTTAAG 10740

GAAAAATTTA ATCCAACGAT TGAAGAATAC TTGGGTGAAT TTACAATGCC CACTCATCCT 10800

CTCTATCCTC TGTTAAGACT TGCTCTTGAT TTCCGTAAAA CATTAAGAAA AAAACATAGA 10860

AAGTAAGTAT ATGGCACTAA CAACACTCAC GAAAGAAGAG TTTCAGACTT ATTCTGATCA 10920

GGTTTCTTCT CGTTCCTTTA TGCAATCTGT CCAGATGGGG GATTTGCTAG AAAAAAGAGG 10980

GGCTCGAATT GTTTATCTTG CTTTGAAACA AGAAGGAGAA ATTCAAGTTG CAGCTCTGGT 11040

TTATAGCCTG CCCATGCTGG GTGGTCTGCA TATGGAACTC AATTCGGGGC CGATTTATAC 11100

CCAACAAGAT GCTCTTCCAG TTTTTTATGC AGAGTTAAAA GAATATGCCA AGCAAAATGG 11160

TGTATTAGAG TTGCTTGTAA AACCCTATGA AACTTATCAA ACTTTTGATA GCCAAGGTAA 11220

TCCAATAGAT GCTGAGAAAA AAAGTATTAT TCAAGATTTG ACTGATTTAG GTTATCAATT 11280

TGATGGCTTA ACAACAGGTT ACCCAGGTGG AGAACCAGAT TGGTTATACT ATAAAGATTT 11340

AACTGAATTA ACTGAAAAGA GTTTGCTTAA AAGTTTTAGC AAAAAGGGTA AACCCTTGGT 11400

GAAAAAGGCT GAAACCTTTG GCATTCGGTT GAAAAAGTTA AAACGTGAAG AACTATCGAT 11460

TTTTAAGAAT ATAACAAAAG AAACCTCTGA ACGTAGAGAA TATAGTGATA AAAGTTTAGA 11520

ATATTATGAG CATTTTTATG ATACTTTTGG AGAACAAGCG GAGTTTCTCA TAGCAAGCTT 11580

AAATTTTTCG GACTATATGA GCAAATTGCA AGGTGAACAA AGTAAACTAG AAGAAAACTT 11640

GGACAAGTTG CGACTTGATT TGAGTAAAAA TCCTCATTCT GAGAAAAAAC AAAATCAACT 11700

GAGAGAATAT TCTAGTCAAT TTGAAACGTT TGAAGTTCGA AAAGCAGAAG CGCGAGACTT 11760

GATTGAAAAA TATGGAGAAG AAGATATTGT TTTAGCTGGG AGTTTATTTG TTTATATGCC 11820

TCAGGAAACG ACTTATCTCT TTAGTGGTTC CTACACTGAG TTTAATAAGT TCTATGCCCC 11880

TGCACTGCTT CAAAAATATG TTATGTTGGA AAGCATAAAA CGTGGAATAC CTAAATACAA 11940

CTTCCTAGGC ATTCAAGGGA TTTTTGATGG AAGTGATGGT GTTTTGCGTT TTAAACAGAA 12000

TTTTAATGGC TATATTGTAC GCAAAGCAGG TACTTTCCGT TACCATCCAT CGCCTTTAAA 12060

ATACAAAGCT ATCCAGTTAC TCAAAAAAAT AGTAGGACGT TAAGATGAAA AAGTCAGTAT 12120

TTAGATTTCT TTTAGCTTCT TTTAGTAAAA TAATTCTTAT TTGCTAGAAA GGTGGAGAGA 12180

CATGCGCTGG CTTTTTCGTT TGATAGGGGC TTTCTTTTCT TTTGTGTGGC GTTTGTTTTG 12240

GCGTCTGGTT TGGATAGTTG TGCTCTTATG TGTGCTTGCT TTCGGACTTC TCTGGTATCT 12300

GAACGGAGAT TTTCAAGGAG CGCTAAAGCA AGCAGAACGG TCAGTAAAAA TTGGTCAACA 12360

AAGTATTGAC CAATGGGAGA AAACAGGGCA ACTGCCTAAG TTAAGCCAGA CAGATAGTCA 12420

CCAGCATTCT GAAGGAAGGT GGGCACAGGC CTCTGCTCGT ATTTACCTGG ATCCGCAGAT 12480

GGATTCACGC TTTCAAGAGG CTTATTTAGA AGCAATCCAG AACTGGAATC AAACTGGTGC 12540

TTTTAACTTT GAACTCGTGA CTGAGTCTAG TAAGGCGGAT ATTACGGCTA CGGAGATGAA 12600

CGACGGAGGC ACTCCTGTGG CAGGAGAGGC GGAAAGTCAA ACTAATCTCT TAACAGGGCA 12660

ATTCTTGTCC GTAACGGTGC GGTTGAATCA TTATTATTTG TCCAATCCAT ACTATGGCTA 12720

CTCCTATGAA CGCCTTGTCC ATACGGCAGA ACATGAGTTA GGTCATGCGA TTGGCTTGGA 12780

CCATACAGAT GAGAAGTCTG TCATGCAACC AGCAGGTTCC TTTTATGGTA TCCAGGAAGA 12840

GGATGTTGCA AACCTCCGAA AAATATATGA GACTAGTGAG TAGGGTACTA TCTTTCCCTA 12900

CTTTTTTTGC TATAATGGAA CTATGAACAA CTTGATTAAA TCAAAACTAG AGCTCTTGCC 12960

GACCAGCCCT GGTTGCTACA TTCATAAGGA TAAAAATGGC ACCATTATCT ATGTAGGAAA 13020

GGCTAAAAAT CTGCGTAATC GAGTACGGTC CTATTTTCGT GGAAGTCATG ATACCAAGAC 13080

AGAGGCTCTG GTGTCTGAAA TTGTGGATTT TGAATTTATT GTTACGGAGT CTAATATTGA 13140

GGCACTTCTC CTAGAAATCA ACCTGATCAA GGAAAACAAG CCCAAGTACA ATATCATGCT 13200

CAAGGATGAC AAGTCCTATC CTTTCATCAA AATCACCAAT GAGCGCTATC CACGCTTGAT 13260

TATCACTCGT CAGGTCAAAA AGGACGGAGG TCTTTATTTT GGACCCTATC CCGATGTGGG 13320

GGCAGCCAAT GAAATCAAGC GGTTGCTGGA TCGGATATTC CCTTTTCGTA AGTGTACCAA 13380

CCCGCCCTCT AAGGTCTGTT TTTATTACCA TATCGGCCAG TGTATGGCCC ACACCATCTG 13440

TAAGAAGGAT GAGGCTTATT TCAAGTCTAT GGCCCAGGAG GTGTCTGATT TTCTGAAAGG 13500

TCAGGATGAC AAAATCATCG ATGATCTCAA GAGTAAAATG GCAGTAGCAG CACAAAGTAT 13560

GGAGTTTGAA CGTGCGGCGG AATACCGTGA CCTGATTCAG GCTATTGGAA CGCTTCGAAC 13620

CAAGCAACGG GTCATGGCGA AAGATTTGCA AAATCGCGAT GTCTTTGGCT ACTATGTGGA 13680

TAAGGGCTGG ATGTGTGTGC AGGTTTTCTT TGTCCGTCAG GtAAGCTCAT CGAGCGCGAT 13740

GTCAATCTCT TCCCCTACTT CAATGATCCA GATGAGGATT TTTTGACCTA TGTAGGACAA 13800

TTCTATCAAG AAAAATCTCA TCTAGTTCCC AATGAGGTAC TGATTCCGCA GATATTGACG 13860

AAGAAGCTGT CAAGGCTTTG GTGGATTCCA AGATTCTTAA GCCTCAACGT GGAGAGAAAA 13920

AACAACTGGT CAATCTAGCC ATAAAAAAATG CTCGTGTTAG TCTAGAGCAG AAGTTCAATC 13980

TGCTAGAAAA ATCTGTCGAA AAGACTCAAG GAGCTATTGA AAATCTAGGG CGTTTGCTCC 14040

AAATCCCGAC CCCAGTACGT ATCGAGTCCT TCGATAACTC TAATATCATG GGAACTAGCC 14100

CTGTTTCGGC TATGGTGGTC TTTGTCAACG GTAAACCGAG TAAGAAGGAT TACCGTAAGT 14160

ACAAGATAAA AACGGTTGTT GGACCAGACG ACTATGCCAG CATGAGAGAG GTCATTCGCA 14220

GACGCTATGG TCGAGTACAG CGTGAGGCTT TGACTCCTCC AGATTTGATT GTGATTGATG 14280

GGGGGCAAGG TCAAGTCAAT ATCGCTAAGC AGGTTATCCA AGAGGAACTG GGCTTGGATA 14340

TTCCAATTGC TGGGCTGCAA AAGAATGATA AGCACCAAAC CCATGAATTG CTCTTTGGAG 14400

ATCCGCTTGA GGTGGTGGAT TTGTCTCGCA ATTCTCAGGA ATTTTTCCTC CTCCAACGCA 14460

TCCAAGATGA GGTGCACCGC TTTGCTATCA CTTTCCACCG CCAACTGCGC TCCAAAAATT 14520

CTTTCTCATC TCAATTGGAT GGGATTGACG GTCTGGGACC TAAACGCAAG CAGAATCTTA 14580

TGAAGCATTT CAAGTCTTTG ACCAAAATCA AGGAAGCCAG TGTGGATGAG ATTGTCGAAG 14640

TTGGGGTACC TAGAGTCGTT GCAGAGGCTG TGCAAAGAAA GTTGAACCCG CAGGGAGAAG 14700

CCTTGCCTCA AGTAGCAGAA GAAAGAGTAG ATTACCAAAC GGAAGGAAAC CACAATGAAC 14760

CATAAAATCG CAATTTTATC AGATGTTCAT GGCAATGCGA CGGCGCTAGA AGCAGTGATT 14820

GCAGATGCTA AAAATCAAGG GGCCAGTGAA TATTGGCTTC TGGGAGATAT TTTTCTTCCT 14880

GGTCCAGGCG CAAATGACTT AGTCGCCCTG CTAAAGGACC TTCCTATCAC AGCAAGTGTT 14940

CGAGGCAATT GGGATGATCG TGTCCTTGAG GCTTTAGATG GGCAATATGG CTTAGAAGAC 15000

CCACAGGAAG TTCAGCTCTT GCGTATGACA CAGTATTTGA TGGAGCGAAT GGATCCTGCA 15060

ACGATTGTCT GGCTACGAAG CTTGCCTTTG CTGGAAAAGA AAGAAATTGA CGGATTGCGC 15120

TTTTCTATCT CTCATAATTT ACCTGACAAA AACTATGGTG GTGACTTGCT AGTTGAGAAT 15180

GATACAGAGA AATTTGACCA ACTGCTAGAT GCGGAAACGG ACGTGGCAGT TTATGGTCAT 15240

GTTCACAAGC AGTTGCTTCG TTATGGAAGT CAAGGGCAAC AAATCATCAA TCCAGGGTCG 15300

ATTGGCATGC CCTATTTTAA TTGGGAGGCG TTAAAAAATC ACCGTTCCCA GTATGCCGTG 15360

ATAGAAGTTG AAGATGGGGA ATTACTCAAT ATCCAATTTC GTAAAGTTGC TTATGATTAC 15420

GAAGCTGAGT TAGAATTGGC CAAGTCCAAG GGGCTTCCCT TTATCGAAAT GTATGAAGAA 15480

CTGCGTCGTG ACGATAACTA TCAGGGGCAC AATCTGGAAT TATTAGCCAG CTTAATAGAA 15540

AAGCATGGGT ATGTAGAGGA TGTGAAGAAT TTTTTTGATT TTTTGTAAGA GTTTCCTAAA 15600

ATAGCCAATG CAAACTAAAA AAGCGATTTG CTGGTCCAAT CGCTTTTAGT ATATCTTATA 15660

CTCAATGAAA ATCAAAGAGC AAACTAGGAA GCTAGCCGTA GGTTGCTCAA AGCACAGCTT 15720

TGAGGTTGCA GATAAAGCTG ACGTGGTTTG AAGAGATTTT CGAAGAGTGT TATTGTAACT 15780

GAGATTGATC TGGGAGGTAA GAACCACCTA GATAGGTATT GCTGAGTTTT TCAAGGGTTC 15840

CGTCTTGATA GAGTTCTTTG AGCGCTTTAT CAAATTGCTC TTTAAACTCT TTTTGGTCGC 15900

TTGAGAAAAT GATATAATTG CTGGGGCTAT CTGCAGAAGG TAAATCAACG ACTGAGAGGT 15960

CTAAACCACG GTCCTTGATA ATCTTTTGAA CGGATACCTT GTCAAAAACT AGGAAATCAA 16020

ACTCTCCGTT AGCAAGGTCT AGGATTCGTT TACCAATATC CTCACCAGAA AAATTAATTG 16080

TAGCGGGATT ATCAGTGTGT TTCTGATTCC AGTTATTGAT GAATTGAGCG TTAGAAGTTC 16140

CGGTATCCTC TTGTGTTGTT TTACCAGCGA TCTGGTCAAG AGAAGTCAAA GGATTTTTCT 16200

TGTTGCTGAC AAGGACGAGG GGATTGTTGG AAATTGGAAG CGAGTAAAGG TATTTTTCAG 16260

CACGCTCTTT TGTGTAACTC AAGTTATTGG CCGCAGCCTG ATAGTGACCA GAATCAAGTC 16320

CTGGGAAGAT GCTCTCCCAG GCGGTTCTTT GGAATTGAAT CTCGTAGTCG CTGAGTTTTT 16380

CATCTACTGC CTTTAAAACT TCGATATCAA AGCCTGTCAG ATTGCCCTTG TCTTCGTAGT 16440

CAAATGGTGG CACGTCGCCA GCTGTAGCAA GGACGATTGT CTTTTGAGCG CTAGTCTCTT 16500

TGGGTGTAGC TTGATTCTCA CAGGCAACCA AAAATGGTAG GATAGCTAGT AATAGGCTAA 16560

ATTTTTTCAT ACTGTCTCCA TTCAAATGTA AAG 16593

(2) INFORMATION FOR SEQ ID NO: 53:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 3510 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

GGGATATCCT TATATCCTTG TTCCTGGAAC CATTGTGGGA ATTGCTCAAC AGTTTTTTCA 60

CCTTGAATTC CTGGTGCAAT GACAGTAAGA ATTTCGAAAT CACGATCTGG TTTCGCCGCT 120

AGTTCCATCA ACTCTGGCAT ACTTTTCTTG CATGGACCAC ACCATGAAGC CCAAAACTTC 180

AAGTAAACCT TTTTACCCTT AAAATCAGAT AACTTAACTT CTTTGCCATC CATGGATTGC 240

AATGTGAAGT CTGGAGCATC TTTTCCAACA GCAATTTGTT GTACAGTCGT TTGTTGTTTT 300

GGCTGTTGTG CTGCTTGAGT CTTTTTAGTT TCTTCCTCAC CACAGGCCAT CAATACAACT 360

AATGACAAGA GACTTAAGCC AGCAAACATT ACTTTTTTCA TTTGTCCTCC TTTATTCAAA 420

AATTCCAGCT AGAACATTTA CTTGTCCTAA TAGTAACAAA ATTCCCATTA AAACAATGAG 480

GAAACCACCA ATTTTCTTTA GTAGCATCAT ATGACGCTTG ATTTTACTAA AATATGGCAT 540

GACTAGACCT GAAGCTAGTG CCAATACCAA GAAAGGAAGG GCCATGCCaG AGTGTAAATG 600

AGAGTATAAA TCGCTCCTTG CCAAGCGCCA TTGCCTCCAG AAGCCGCAAG TGCTAAAACA 660

GAACTTAAAA CTGGACCAAT ACAAGGTGTC CAACCAAAGC TAAAGGTAAT ACCAAGTAAA 720

AAAGCTGACC AATAACGATT AGAATCTGAT TTTTTAAAGG TAAAACTTTT TTGAACTTCT 780

AATTTCTTCA AATGAAAAAT TTCCATCTGG TGAAGACCCA AAATGATAAT AATAGCTCCC 840

ATGCCATATC.GAAACCAATT TGCATAGAGA ATATGACCAA AGTAACCAGC ACCAAAGCCT 900

AGAATAAAGA AAATGAGAGA GATACCAGCG ATAAAGCAAA GTGTTCGAAT CAAGCCTGAC 960

CAGAGAACCT TTCTCCCAAA CAAAGAAAAG CTTTTTGCAC TTTCTTGATC ATCCAATAAA 1020

ATCCCAGCAT AGACTGGCAG AAGAGGAAAA ATACAAGGAG AAAAAAAGGA TAAAACACCT 1080

GCTAGAAAAA CAGAGATTAA AAATACTATC GTTTCCAATA AAGAACCAAC TTTCTTAATA 1140

ATTCTAATCC TATTTTACTA TATTCAATTT TATTTGTAAG CTTTCTGCTA CGCAAAATCG 1200

TATCGGGCAC TATTGGACCA ATCTTTTCTT TTGCTAGTCA AGGCGGATCT TATCCCCCAA 1260

AATAGCCAAA AAGCAACGAC AAGGATTACT CATCGCTGCT TTTGTGAACG AAAATGTCTT 1320

TTAGGTCTGA CATTTCATAA ATCATGTTTT ACTTGAGTTT GTCAAGGATT GCTTTAAGCT 1380

CCTCTACTAG TTTAGTTTCT GTCTCTGCTG AGCCATTTTC TTCTTTCACG AAATCAAGGG 1440

TTTCTTGGAG AAGGTTTTGG GCTTTGGCAA GGACTTTTTT ATCCGCTTTT TCTGCATCTA 1500

GCTGTCCTAG AACCTTGATC AATTCCGTGC TTAATTGCTG GATTTCTGAC TCTTTCTTAC 1560

GGCGAATCAG CCAGAAGGCA ATCACGCCTA GGAGGGCAAG TAGACTGACC ACAATCACTC 1620

CTGCCGGAAC TGAGTTTGTT TCAGTCATCT TATCTGAATC CTTACTATCT TCCGTTCCTT 1680

GTTTTGCATC CTTCTTGTCC TGTGCAGGCT TGCTGTCGCT AGCATTTGCT TTCACATCTT 1740

TGAGAGAGTC CAAGGCAGCC CAGCCTTCAC AGACTCTACT GCAGTATGCA GACCTTACTC 1800

TGTCAAGGCA CTATCTTCCG GAGCTTTTTG AGCATCTAGG AGGACAGCCT TGGTTGCATC 1860

GATTTTCGGA TCAGATACTG TTGCCAAAGC TTTCAAGCGT TGGTCTAACT CTTGACTCAA 1920

GGCACGAAGT TCAGACTTGT CAACTTGCTC TTGAGCTTGT GTGCTCGTTG AGCTAGCCGA 1980

AGCGCTTGCT ACCACTCTAG GATCTTGAGT CGGAGCTGAG CTTGGAGCTG GGACAGGGCT 2040

TGCAGGTTGA CTAGGAACAG TTATGGTATA TTGAAACTAG AATAGTACAT ATGGACTTCT 2100

AAAACATTGT TAGAATTCGA TTTTACTGTC CTGATCGATT TGTCCTATTC TTATTTCATT 2160

TTACTATAAT AACCGATGGT GTGGTTAATG TTGGTAAGAG AAACTTCTGA AACCAAGCTT 2220

CAAAAAAGTC GCTCGTCATC GTCTCTTCGT AAGTCATTGG AGCGATTAAT TCACCATTTG 2280

TTAGACCTGC AACCAAAGAA ATCCTCTGAT ATCTTCTTCC AGATACTTTG CCTCTTATTA 2340

ACTGACCTTT TAATGAGCGA CCATATTCTC GATAAAAATA AGTATCGAAT CCTGTTTCGT 2400

CAATCTAAAC AGGTGCTAGG TGCTTTAAAC TATTAAAATT CTTAAGAAAT AAGGCTACTT 2460

TTTCTGGGTC TTGTTCATAG TAGGTGTGGT TCTTTTTTTC GAGTGTAGCC CATAGCTTTG 2520

AGCGCATAGT GGATGGTAGT TGGATGACAG CCAAAkTCAG AAGCTATTTC AGTCAAATAA 2580

GCrTCTGGAT TGTCAGTAAG ATAGTTTTTA AGTCTATCTC TATCAACTTT TCTTGGTTTT 2640

GTTCCTTTTA CTTGGTGGTT TAGCTCTCCT GTTTTCTCTT TTAGCTTTAA CCAGCCATAA 2700

ATGGTATTAC GTGAGATTTG GAAAACGTGT GATGCTTCTG TTATACTACC TATTCGCTCA 2760

CAATAAGAGA GAACTTTTTT ACGAAAATCT ATTGAATATG CCATAAGAAG ATTATACCAC 2820

ATTGTGTACT ATTTTTGGTT CATTTCACTA TAACACAAAA TAGATTATTA TTACATAACA 2880

AAAAAGAGGT CTAAACCTCT TAACTCAATT ACTCCGCCAG TAGGACTCGA ACCTACGACA 2940

TCATGATTAA CAGTCATGCG CTACTACCAA CTGAGCTATG GCGGATTAAA GCTAAGCGAC 3000

TTCCCTATCT CACAGGGGGC AACCCCCAAC TACTTCCGGC GTTCTAGGGC TTAACTTCTG 3060

TGTTCGGCAT GGGTACAGGT GTATCTCCTA GGCTATCGTC ACTTAACTCT GAGTAATACC 3120

TACTCAAAAT TGAATATCTA TTCAATTTAA GAAAACCGTT CGCTTTCATA TTCTCAGTTA 3180

CTTTGGATAA GTCCTCGAGC TATTAGTATT AGTCCGCTAC ATGTGTCGCC ACACTTCCAC 3240

TTCTAACCTA TCTACCTGAT CATCTCTCAG GGCTCTTACT GATATATAAT CATGGGAAAT 3300

CTCATCTTGA GGTGGkTtCA CACTTAGATG CTTTCAGCGT TTATCCCTTC CCTACATAGC 3360

TACCCAGCGA TGCCTTTGGC AAGACAACTG GTACACCAGC GGTAAGTCCA CTCTGGTCCT 3420

CTCGTACTAG GAGCAGATCC TCTCAAATTT CCTACGCCCG CGACGGATAG GGACCGAACT 3480

GTCTCACGAC GTTCTGAACC CAGCTCGCGT 3510

(2) INFORMATION FOR SEQ ID NO: 54:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20986 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

CGGAGAAAAA CATGGCTAAG TCAAACTTTG AAAAAGTAGA ATCAGTTGTT GGCTGGGTTC 60

GTGATAAGAA AATCACAGGC TACCGTATCT CTAAAGAAAC GAATGCGCGT GAAATGTCTA 120

TCATTGCTCT GGCGCAGGGT CGTGCAAAAG TAAAAAATAT TTCATTTGAA ACAGCCCTAG 180

GCCTAATTGA TTTCTATGAA AAAAATTATG AAAAATTTGA AGATTAATCT TTGGATAACG 240

GCGGATTCTT GACCTTCAAG TAGTAGAGAT AGAGAATCTG CCTTTTCATT TTGAGGACAG 300

CAAAAAGACT GCACGGTTGA TGCAGCCTTT TCTTTTTATT TGAGATAGCG TTGAAGGAAC 360

TCTTTTGTTC GGTCTTCTTT AGGATTGGTG AAGAGGTCTT CTGGTTTACC TTCTTCAGCG 420

ATCACGCCCT TATCCATAAA GATAACACGG TGAGAGACAT CACGGGCAAA TTCCATTTCA 480

TGGGTTACGA CAATCATGGT CAAGCCTTCC TGAGCCAGGT CCTGCATGAT TTTGAGGACT 540

TCTCCAACCA TTTCTGGATC GAGAGCTGAT GTTGGTTCAT CAAAGAGAAT AGCGTCCGGA 600

TTCATGGAGA GGGCACGAGC GATGGCCACA CGTTGTTTTT GACCACCTGA GAGTTGTTTT 660

GGTTTGGCTT GCCAGTAGCG TTCTCCCATG CCGACCTTTT CCAGGTTTTC TTTGGCAATC 720

TTTTCAGCTT CTGTGCGTTC GCGTTTTAGG ACAGTTGTCT GAGCGACGAT TGTGTTTTCA 780

AGAACATTGA GATTTTCAAA GAGGTTAAAG GATTGGAAAA CCATCCCCAA CTTTTCACGG 840

TATTGCGTGA GGTCATAGCC TTTTTCGAGG ACGTTTTGTC CATGATAAAG GATTTGTCCA 900

TCAGTTGGTG TTTCAAGTAG GTTAATGGAG CGTAGGAAGG TCGATTTTCC GCTTCCAGAG 960

CTTCCGATGA TAGAGATGAC CTCTCCCTTG TGGACAGTGA GTGAAATGTC TTTTAGCACT 1020

TCGTTTTGTC CATAGGATTT TTTGAGGTGT TTAATTTCAA GGATTGCTTG TGTCATTATT 1080

TCAAATCCTC CGTTTGCATT TGGTTAGCAC CTGTAGTGTA GGTATCCATG TCCATTCTGC 1140

GCTCGATAAA GCGTAGGATA CGTGTTACGG TGAAGGTGAG GACAAAGTAA ATCACGGCGA 1200

TGATTGTAAA TGTCTGGAAG TATTGATAGG TTTGTGTTGC CACGGTATTT CCTGAGAAAT 1260

AAAGTTCGAC AACAGAGATA ACGTTCAATA CAGATGTATC TTTGATATTG ATGACAAATT 1320

CATTACCAGT TGCAGGTAGG ATGTTACGGA CTACCTGAGG TAGGACAATC TTACGCATGG 1380

TCTGGTTATG GGTCATACCA AGAGCAGTCG CAGCTTCAAA TTGTCCCTTG TCAACTGCTA 1440

GGATACCACC ACGGACGATT TCAGTCATGT AGGCACCGGT ATTGATTGAA ACGATGAAGA 1500

TAGCAGCCAG TGTACGGTCA AGGTTGATCC CGAAAGCTTG GGCAGTTCCA TAGTAGATAA 1560

CCATCGATTG AACAATCATT GGCGTACCAC GGAAAATTTC AATGTAGACA TTGAGAACCC 1620

AGCCGACTAG TTTTTGTAGG CCGTAAATGA CTTTGTTTTC AGAGAGAGGA GCAGTACGGA 1680

AGACACCAAT GGCAAGTCCA ATAATGAGAC CTATGATGGT TCCGACGATA GAGATTAAAA 1740

GAGTGATACC AGCACCACGC AAGAGTTGTT GCCAGTTTTC AGAAAGAATT TTAGCAACTT 1800

GGCTAAAGAA ACTACTGCTA GTCTCTTCAG TTGTTGTAGC TTCGGCAGGT TGTTCCTTGA 1860

TCATACGATC CATCAAGGCA ACTTGGTCAT CTTTTGAAAT GGTTTCAATG CTGGCATTGA 1920

TTTGGCTAAT ACGATTGTCA TTTTTACGAA GCCCGATAGC GATAGCTGTA TCTTCTTCCC 1980

CAGTTTTGAA ACCAGGTTCT ACTTGAATCA TCTTGAACTT AGAGTTCGCA GCTTCAGCAG 2040

TCAGTGCTTC TGGACGTTCA GAAACATAAG CATCAATGAC ACCAGCCTCA AGAGCTTGTC 2100

GCATTTGAGC GAAGTCTCCC ATGGCTGTTT CTTTTTTAGC ACCTGGGATT TGTGCAATCA 2160

AGTTATAAAG GTAGACCCCT TGTTGAGAAG TGATTTTTGC ACCGTTAAAG TCATCCAAAG 2220

ATTTAGCACT TGCGTAGGCA GAATCTTTTT TGACAAGCAA AACTGGTTCG CTAGTATAGT 2280

AACTGCTCGA AAAGGCAATT TCTTGTTTGC GTTCTGCAGT TGGACTCATA CCTGCGATAA 2340

TCATGTCAAT CTTACCAGAA GTAAGGGCAG GGACTAGACC TTCCCACTTG GTTTTAACAA 2400

CCAAAGGTTC TTTACCTAAG TCCTTAGCGA TTTTCTTGGC GATTTGAACA TCGTATCCGT 2460

TGGCATACTG ATTGGTCCCA TCGATTTTGA CAGCTCCGTT GCTATCATCA TCCTGGGTCC 2520

AGTTAAAGGG AGCATATGCT GCTTCCATAC CGATGCGTAA ATATTCATCG GCTTGAGCAA 2580

CATTGACAAG TCCTAGCATC AGCAAGAGAC TTGTGAAAAT AGATAAGTAy ATGTGGCTCA 2640

TGATTTCTCC TATTCTGATC TATTAAAAAA TAACTGTCTC CTATTTTATC GAAAAATGCG 2700

TAATTTTTCA ACATAAGTAA GTCTTTACTT ACGAAAAAAT GCTATAATGA TAAGAAAGAT 2760

AAAAAGGGGG CTTAGTTGAT GAAAAAAACT TTTTTCTTAC TGGTGTTAGG CTTGTTTTGC 2820

CTTCTTCCAC TCTCTGTTTT TGCCATTGAT TTCAAGATAA ACTCTTATCA AGGGGATTTG 2880

TATATTCATG CAGACAATAC GGCAGAGTTT AGACAGAAGA TAGTTTACCA GTTTGAGGAG 2940

GACTTTAAGG GCCAAATCGT GGGACTTGGA CGTGCTGGTA AGATGCCTAG CGGGTTTGAC 3000

ATTGACCCTC ATCCAAAGAT TCAGGCCGCG AAAAACGGTG CAGAACTAGC AGATGTGACT 3060

AGCGAAGTAA CAGAAGAAGC GGATGGTTAT ACTGTGAGAG TCTATAATCC AGGTCAGGAG 3120

GGCGACATAG TTGAAGTTGA CCTCGTCTGG AACTTAAAAA ATTTACTTTT CCTTTATGAT 3180

GATATCGCTG AATTAAATTG GCAACCTCTG ACAGATAGTT CAGAGTCTAT TGAAAAGTTT 3240

GAATTTCATG TAAGGGGAGA CAAGGGGGCT GAAAAACTCT TTTTCCATAC AGGGAAACTT 3300

TTTAGAGAGG GAACGATTGA AAAGAGTAAC CTTGATTATA CTATCCGTTT AGACAATCTT 3360

CCGGCTAAGC GTGGAGTTGA GTTGCATGCC TATTGGCCTC GGACCGATTT TGCTAGCGCT 3420

AGGGATCAGG GATTGAAAGG GAATCGTTTA GAAGAGTTTA ATAAGATAGA AGACTCGATT 3480

GTTAGAGAAA AAGATCAGAG TAAACAACTC GTTACTTGGG TCCTCCCTTC GATCCTTTCC 3540

ATCTCCTTGT TATTGAGTGT CTGCTTCTAT TTTATTTATA GAAGAAAGAC CACTCCTTCA 3600

GTCAAATATG CCAAAAATCA TCGTCTCTAT GAACCACCAA TGGAATTAGA GCCTATGGTT 3660

TTATCAGAAG CAGTCTACTC GACCTCCTTG GAGGAAGTGA GTCCCTTGGT CAAGGGAGCT 3720

GGAAAATTCA CCTTTGATCA ACTTATTCAA GCTACCTTGC TAGATGTGAT AGACCGTGGG 3780

AATGTCTCTA TCATTTCAGA AGGAGATGCA GTTGGTTTGA GGCTAGTAAA AGAAGATGGT 3840

TTGTCAAGCT TTGAGAAAGA CTGCCTAAAT CTAGCTTTTT CAGGTAAAAA AGAAGAAACT 3900

CTTTCCAATT TGTTTGCGGA TTACAAGGTA TCTGATAGTC TTTATCGTAG AGCCAAAGTT 3960

TCTGATGAAA AACGGATTCA AGCAAGAGGG CTTCAACTCA AATCTTCTTT TGAAGAGGTA 4020

TTGAACCAGA TGCAAGAAGG AGTGAGAAAA CGAGTTTCCT TCTGGGGGCT CCCAGATTAT 4080

TATCGTCCTT TAACTGGTGG GGAAAAGGCC TTGCAAGTGG GTATGGGTGC CTTGACTATC 4140

CTGCCCCTAT TTATCGGATT TGGTTTGTTC TTGTACAGTT TAGACGTTCA TGGCTATCTT 4200

TACCTCCCTT TGCCAATACT TGGTTTTCTA GGGTTAGTTT TGTCTGTTTT CTATTATTGG 4260

AAGCTTCGAC TAGATAATCG TGATGGTGTT CTAAATGAAG CGGGAGCTGA GGTCTACTAT 4320

CTCTGGACCA GTTTTGAAAA TATGTTGCGT GAGATTGCAC GATTGGATCA GGCTGAACTG 4380

GAAAGTATTG TGGTCTGGAA TCGCCTCTTG GTCTATGCGA CCTTATTTGG CTATGCGGAC 4440

AAGGTTAGTC ATTTGATGAA GGTTCATCAG ATTCAAGTGG AAAATCCAGA TATCAATCTC 4500

TATGTAGCTT ATGGCTGGCA CAGTACGTTT TATCATTCAA CAGCACAAAT GAGCCATTAT 4560

GCTAGTGTCG CAAATACAGC AAGCACCTAC TCTGTATCTT CTGGAAGTGG AAGTTCTGGT 4620

GGTGGCTTCT CTGGAGGCGG AGGTGGCGGC AGTATCGGTG CCTTTTAAAG AGAGCTACCA 4680

TAGACTGAAA AAGTATGATA TAATGGAAGA TAGAAAAAAG ACAAACTATA AGAAAAGTCA 4740

ATAGTTTTAT CTAAACTATT TCTTATTTCA ATTTGATGAT TTGGCGATGA TTTTAGAGCA 4800

CGGCAAAAAG CCCTTGAAAA AGTCCATTTT TTCAAAGGTA ATCCTGTGTT AATTTCAGAA 4860

ATTACATCAC TTTTTGTTCG TCAAATGGCA GCTCTTTTTT AGGATATAAA ACAGGGTTCG 4920

GATAAGTTTT TTTGCAAGGT GGATGATGGC TACATTGTAA TGTTTTCCTT ATTCTAACTT 4980

AGTCTTAAGA TAGGCCTTAG AAGCAGGTGA AAAGCGAGGG CATGCTTTGG CAGCTTGTAT 5040

GAGTGCCCAC CGCAGATGAG GGGAACCCCG TTTGACCATT CTTCCAGCTA AATCAATCTG 5100

ACCTGACTGA TAAATAGAAG AATCCAGTCC AGCGAAAGCT TGTAATTGAG CAGGATTATC 5160

AAAGGCATGA ATATTTCGAA TCTCGGCTAA AATGACCGCC CTAAACGATC CCCAATCCCA 5220

GTAACCGTCG TGATGACCGA GTTGAACTCA GCCATCGAGT CATTGATACA TGTTTCCGCC 5280

TTGTCAATGA GCCTCTTGTA ATGCTTGATG ATTTCGAATT CACGAGCAGG AGATGTTGTT 5340

CCGATAGAAC GAGGTGCGAC TGAGAGGATA TCCTGAATTT TAGAAGCGGT CAATCGCTTA 5400

ATTTCTATCA GCTTATCAAA TCCTGCCTCA ATCCTTTTCT GAGGATTAGG GTAGCGTGTC 5460

AAGAGTTGGT AGGTATATTC TGAATGCTTT CCAACGATTT TATCCAACTC AGGAAAGATG 5520

ATATCAAGAC AACGAGTGTA TTGTACTTTC CAATCAGACT GTTTTTCTTG AGACGATGAA 5580

TATGTCTAGC CAGTATTTTT AGGTCTACTT GCCGATTATC GTGTTGAAAT TGTTCACGAT 5640

TGGGGTCAGA AAGAAGTTTA AGAGCGATGC CATGAGCGTC TTTCTTATCC GTTTTAGTCT 5700

TGCGAAGTGA TAATGATTTG GCAAATTCCT TGATGAGCAA AGGATTGTAG GTGTAAACTT 5760

TATATCCTTG TTCATGCAGG AAGTTCAGTA GATTAAAGGC ATAATGTCCA GTATCTTCAA 5820

GAGCGATGAG ACAGTCTTGG TTGATCTGTC GAATAGACAG ATCTAAGAGT TCAAAACCAG 5880

CTTTATTATT TGAAAAAGTG AGTGGTTTAA GAACAGTTTT TCCTGGAACA TTCAAGGCTG 5940

TAACATCGTG TTTATTTTTA GCGATATCAA TGCCTACATA AAGCATGGGA GTACCTCCAG 6000

ATATAGTATT TCAAGTCTAC TTGGTTATCC ACGAATTTTT TGCCTTGTTA CCTTAGACGA 6060

GATCAAACGT CTATGCGTTA TCAAACTCAT TACCAATTGA AACAAAAGCT GTGGTTAGAG 6120

CCTTTCGGAA ATCGTCAAGC GATTGGAGGA AATGAACTAA TCCATAGTGG CTTATTCCAA 6180

GTATACCACT TGGGCTTTGG CAGTAGCTAA CTGCGCTAAA TATAATATAG GGAGTAATCT 6240

ATGTATCTTA TTGAAATTTT AAAATCTATC TTCTTCGGAA TTGTTGAAGG AATTACGGAA 6300

TGGTTGCCGA TTTCCAGTAC AGGTCACTTG ATTTTAGCAG AGGAATTCAT CCAATACCAA 6360

AATCAAAATG AAGCCTTTAT GTCCATGTTT AATGTCGTGA TTCAGCTTGG TGCTATTTTA 6420

GCAGTTATGG TGATTTATTT TAACAAGCTC AATCCTTTTA AACCGACCAA GGACAAACAG 6480

GAAGTTCGTA AGACTTGGAG ACTATGGTTG AAGGTCTTGA TTGCTACTTT ACCTTTACTT 6540

GGTGTCTTTA AATTTGATGA TTGGTTTGAT ACCCACTTCC ATAACATGGT TTCAGTTGCT 6600

CTCATGTTGA TTATCTACGG GGTTGCCTTC ATCTATTTGG AAAAGCGCAA TAAAGCGCGT 6660

GCTATCGAGC CAAGTGTAAC AGAGTTGGAC AAGCTTCCTT ATACGACCGC TTTCTATATC 6720

GGACTCTTCC AAGTTCTTGC TCTTTTACCA GGGACTAGCC GTTCAGGTGC AACGATTGTC 6780

GGTGGTTTGT TAAATGGAAC CAGTCGTTCA GTTGTGACAG AATTTACCTT CTATCTTGGG 6840

ATTCCTGTTA TGTTTGGAGC TAGTGCCTTA AAGATTTTCA AATTTGTGAA AGCCGGAGAA 6900

CTCTTGAGCT TTGGGCAATT GTTTTTGCTC TTGGTCGCGA TGGGAGTAGC TTTTGCGGTC 6960

AGCATGGTGG CTATTCGCTT CTTGACCAGC TATGTGAAAA AACACGACTT CACCCTTTTT 7020

GGTAAATACC GTATCGTGCT TGGTAGTGTT TTGCTACTTT ACAGTTTTGT CCGTTTATTT 7080

GTATAAGAAA AACCTTGAAG GGGCAACTCT TCAAGGTTTT ATACTCTTCG AAAATCTCTT 7140

CAAACCGCGT CAGCTTTATC TGCAACCTCA AAACAGTGTT TTGAGCAGCn CTGCGGCTAG 7200

CCTCCTAGTT TGCTCTTTGA TTTTCATTGA GCTTTAAAAT CCAGTCATGG TAATCCCCAA 7260

TAGGCGGACA CCTCTTTCTT TCTTGCTTAA TTCTTCATAG AGTTGCAGGG CTATTTGGCT 7320

TATCTGACTA GCATCTTGTG TTTTTTGAGC AAGACTTTTT CGTTTGGTAA GAGTTGAAAA 7380

GTCCTCGTAG CGGATTTTCA AAATGACAAT TTTTCCAGCT TTTTCTTGTT GATGTAGATT 7440

GAGAGCGACT TTTTCTGATA GAAGAGTCAG CTCTTTTTTG ATATCTTCCT CAGCAAGGAG 7500

AATCTTCCCG TAGGTTTTCT CCTTGCCGAT TGATTTACGG ATGCGATTGG ATTTGACTGG 7560

AGAGTTGTGA ATGCCACGAG CCTTTCGATA CAGATCATAG CCTAGTCTAC CAAAACGGTC 7620

TATTAGGGTT ACCTCAGGAA CTTCAAGTAA ATCAGCACCA GTAAAAACGC CCATTTGATG 7680

AAGACGTTCT ACTGTCTTTT TTCCTACTCC ATGAAATTTG GAAATATCCA TTTGTTTGAG 7740

AAAATCCTCA GCCTGTTCAG GTAGAATCAC TGTCAAACCA TGTGGTTTTT GATAATCACT 7800

CGCCATTTTA GCTAAGAATT TGTTGTAAGA AACGCCTGCG GAAGCAGTTA GATGGAGTTC 7860

TTGCCAGATA TCTTTTTGAA TGAGGCGAGC AATTTTGACC GCTGACTTGA TACCGAGTTT 7920

ATTTTCTGTC ACATCCAAAT AGGCTTCGTC AATGCTCATG GGTTCAATCA AATCTGTATA 7980

GCGCTTAAAA ATAGCTCGAA TCTGGAGTCC CACAGACTTG TATTTCTCAT AATTCCCTGA 8040

GATAAAGACA GCCTGGGGAC AACGTTCATA AGCTTCCTTG GAACTCATGG CAGAATGGAC 8100

ACCAAAAGCT CTTGCCTCAT AACTACAGGT AGAAACGACT CCCCGTCCAC CTGTTTGCCG 8160

AGGGTCGCTT CCAATAATGA CAGGTTTTCC TCTGAGTTTA GGATTATCCC TGATTTCCAC 8220

TGCAGCAAAA AAGGCATCCA TGTCAATATG GATGATTTTT CTTGACAAAT CATTTAACAA 8280

AGGAAAAATC AACATGCCTA GCACCTTTTT ATACTCTTCG AAAATCTCTT CAAACCACGT 8340

CAGCTCTATm TGCAACCTCA AAACAGTGTT TTGAGCAATC TGCGGCTAGC TTCCTAGTTT 8400

GCTTTTCGAT TTCCATTGAG TGTTACTGCT TATTyTCTTT TATTATACCC TTTTTTCTGA 8460

AAAAAAGAAA AAAGGACTTT ATTTTTTCAA AAATATAATA CAGTTTGAAA TAAAATATAG 8520

ACTGTTTTAG AAAAGAAAGT GTAAAAATAG GGAATTTTCA CTTGTTGAAA TCGGTTACTA 8580

TATGGTATAC TTGTCTTATG AATGTAACAG ATGACTGTTA CTAGAAAAAA GAGGACATTA 8640

ATATGGTTGT TAAGACAGTT GTTGAAGCAC AAGATATTTT TGACAAAGCT TGGGAAGGCT 8700

TCAAAGGCGT AGATTGGAAA GAAAAAGCAA GTGTATCACG ATTTGTACAA GCTAACTACA 8760

CACCTTATGA TGGAGACGAA AGCTTCCTTG CAGGACCAAC AGAGCGTTCA CTTCACATCA 8820

AGAAAATTGT AGAAGAAACT AAAGCACACT ACGAAGAAAC TCGTTTCCCA ATGGACACTC 8880

GTCCAACATC TATCGCTGAT ATCCCTGCTG GATTTATCGA CAAAGAAAAT GAAGTTATCT 8940

TCGGTATCCA AAACGATGAA CTCTTCAAAT TGAACTTCAT GCCAAAAGGT GGTATCCGTA 9000

TGGCTGAAAC TACTTTGAAA GAAAATGGAT ACGAACCAGA CCCAGCTGTT CACGAAATCT 9060

TCACTAAATA TGTAACAACA GTTAACGACG GTATTTTCCG TGCCTACACT TCAAATATTC 9120

GTCGCGCTCG TCACGCACAC ACTGTAACTG GTCTTCCAGA TGCATACTCA CGCGGACGTA 9180

TCATCGGTGT TTACGCACGT CTTGCTCTTT ACGGTGCAGA CTACTTGATG CAAGAAAAAG 9240

TAAATGACTG GAATGCAATC AAAGAAATCG ATGAAGAAAC AATCCGTCTT CGTGAAGAAG 9300

TAAACCTTCA ATACCAAGCA TTGCAACAAG TTGTTCGCCT GGGTGACCTT TACGGGGTTG 9360

ATGTTCGCAA ACCAGCGATG AACGTGAAAG AAGCAATCCA ATGGGTTAAC ATTGCTTTCA 9420

TGGCTGTCTG CCGTGTGATT AACGGTGCTG CTACATCTCT AGGTCGTGTA CCAATCGTAT 9480

TGGACATCTT TGCAGAACGT GACCTTGCTC GTGGTACATT TACTGAATCA GAAATCCAAG 9540

AATTCGTTGA TGATTTCGTT ATGAAACTTC GTACAGTTAA ATTTGCTCGT ACAAAAGCTT 9600

ATGACCAATT GTACTCAGGT GACCCAACCT TTATCACAAC TTCTATGGCT GGTATGGGTA 9660

ACGACGGTCG TCACCGTGTT ACTAAGATGG ACTACCGTTT CTTGAACACT CTTGACAACA 9720

TCGGTAACTC ACCAGAACCA AACTTGACAG TTCTTTGGAC TGACAAATTG CCATACAACT 9780

TCCGTCGCTA CTGTATGCAC ATGAGCCACA AACACTCTTC TATCCAATAC GAAGGTGTAA 9840

CAACAATGGC TAAAGACGGA TATGGTGAAA TGAGCTGTAT CTCATGCTGT GTGTCTCCAC 9900

TTGATCCAGA AAATGAAGAA CAACGCCACA ACATCCAGTA CTTCGGTGCT CGTGTAAACG 9960

TTCTTAAAGC CCTTCTTACT GGTTTGAATG GTGGTTACGA CGATGTTCAC AAAGACTACA 10020

AAGTATTTGA TATCGAACCA ATCCGTGACG AAGTTCTTGA ATTTGAATCA GTTAAAGCGA 10080

ACTTTGAAAA ATCTCTTGAC TGGTTGACTG ACACTTACGT AGATGCCTTG AACATCATCC 10140

ACTACATGAC TGATAGGTAC AACTACGAAG CTGTTCAAAT GGCCTTCTTG CCAACTAAAC 10200

AACGTGCCAA CATGGGATTC GGTATCTGTG GATTTGCTAA CACTGTTGAT ACATTGTCAG 10260

CTATCAAATA CGCTACAGTT AAACCAATCC GTGACGAAGA TGGCTACATC TACGATTACG 10320

AAACAATCGG TGACTACCCA CGCTGGGGTG AAGATGACCC ACGTTCAAAC GAATTGGCAG 10380

AATGGTTGAT CGAAGCTTAC ACAACTCGTC TACGTAGCCA CAAACTATAC AAAGACGCAG 10440

AAGCTACAGT ATCACTTTTG ACAATCACAT CTAACGTTGC TTACTCTAAA CAAACTGGTA 10500

ACTCACCAGT TCACAAAGGT GTATACCTCA ACGAAGATGG TTCTGTGAAC TTGTCTAAAC 10560

TTGAATTCTT CTCACCAGGT GCTAACCCAT CTAACAAAGC TAAAGGTGGT TGGTTGCAAA 10620

ACTTGAACTC ACTTTCTAGC CTTGACTTTA GTTATGCAGC TGACGGTATC TCATTGACTA 10680

CACAAGTATC ACCTCGCGCT CTTGGTAAGA CTCGTGATGA ACAAGTTGAT AACTTGGTAA 10740

CAATTCTTGA TGGTTACTTC GAAAACGGTG GACAACACGT TAACTTGAAC GTTATGGACT 10800

TGAACGATGT TTACGAAAAA ATCATGTCAG GCGAAGACGT TATCGTACGT ATCTCTGGAT 10860

ACTGTGTAAA CACTAAATAC CTCACTCCAG AACAAAAAAC TGAATTGACA CAACGTGTCT 10920

TCCACGAAGT TCTTTCAATG GATGACGCCT TGGATGCATT GAGCTAATCA AGTTCTTGAA 10980

TAATAAAAAG GAACCCTCGG TCAAACGACT GAGGGTTTTG TGCTTGGGAT AGTATGAGCA 11040

ATTCCTTCGG CGCAATATGC AATGTTTTTG GGCTCTTTGT CAACTGTAGT GGGTTGAAAA 11100

AAAGCTAAGC TTGAGAAAGG ACAAATTTCG TCCTTTCTTT TTTGATGTTC AGGGCGATAA 11160

AAATCCGTTT TTTGAAGTTT TCAAAGTTCC GAAAACCAAA GGCATTGCGC TTGATGTCTT 11220

TGATGAGTTT GTTAGTGGCC TCAAGTTTAG CGTTAGAATA AGGCAATTCA ATGGCGTTAG 11280

TGATGTAGTT TTTATAGCAA ATAAATGTGC TCAAAGTGGT TTTAAAGGTG CGGTTGAGAT 11340

GAGGTAACGT GTCTTGAATT AAGCCCCAAA ACTGGTCAGT ATTCTTCTCT TGTAGATGAA 11400

ATAGGAGTAG TTGATACAGG TCATAGTAAT CTTTAAGTTC AGGTACTAGA GTAAAGATTT 11460

TCTTCAGACA CTCCCTAGGA GTTAAGGTCT CTCTGAAAGT TCTAGCATAG AAAGGCTTAA 11520

GAGAGAGTTT CCGACTATCT TTTAGGATAA ATTTCCAGTA ATATTTAAGA GCTCTGTATT 11580

CCAGAGATTT ATCATCAAAT TGCTTCATGA TGTTGATTCT AGTCTGATTA AGAGCCCTGC 11640

TCATGTGTTG GACAATGTGG AAACGATCGA GAACAATTTT AGCATTGGGA AATAATTTCT 11700

TAATGAGAGG GATATAACTT CCAGACATAT CAACAGTGAC GACTTTAACT TTTTTTCTAG 11760

CTTCTTTCGA GTACTTGAAG AAATGATTTC GGATGGTTGT TTGACGTCTG TTATCAAGAA 11820

TGGTCATGAT TTTCTTAGTG TTGAAATCCT GAGCAATGAA AGCCAATTTC CCCTTCTGGT 11880

AGGAGAATTC ATCCCAGGAG AGGATTTCAG GCAAAGTGGT GTAATCCTCT TGGAAATGAA 11940

ATTGCTTGAG CTTACGATAG ACGGTAGAGG TAGAGGTAGA GGTAGAGATG GCTAATTTAG 12000

AAGCGATATG TGTAAGAGCC TCTCTGTTGA GTAGGAGTTG GGCAATTTTC TGTCTCACCA 12060

TTTCCGAGAT TTGGCAATTT TTCTGAACGA GAGTTGTTTC AGCTACAGTG ACTTTCCGAC 12120

AGGACTTGCA TTGAAATCGT CTCTTTTTCA AATGAATGAG GCTAGGGAAA CCACCAATCT 12180

CGATAAAAGG GATTTTAGAA GGCTTTTGGA AGTCGTATTT GATTTGTTTT CCTTTACAGT 12240

GTTTACATTT AGGTGGGTGA TAATCAAGTG TAGCGAAGAC TTCGATATGG GTATCGTGCT 12300

GAATGGCTTT ATTTAAGGTG ATGTTTTTGT CTTTTATTCC GATGAGTAAT GTGGTATGAT 12360

TGATGTGTTC CATAAGATAC TTTCTAATGA GTTGTTTAGG CGCTTTTCAT TATAAGTCTT 12420

ATGGGACTTT TTTGATACTC AAAAAGCCCT ATAATCTCCA CAGTGGGATT TACCCACTAC 12480

AGAAATTATA GAGCCAGAAA AAACACTTTT GTTCACTAGC AGAAACTAGA GAGCAGAAGT 12540

GTTTTTCTGT TCAGATTTAC CCAAAACTGG GAAATATGGG GATAAGAATA GAGATGGCTT 12600

AGGAAGCCCC TTTTTGTGTG TAGACAGTAC GATGAACTTA TAACAAATAG TGAGCCTTTT 12660

TAGCAATCAT TGCGACCCGT TTGTCAAAAG CCTCTTTTCG GATATCTACA ATTGTCTGAT 12720

AGATGAGACG CTGTTGGCTA ACATGCAAAT CTAAGGCAAT CGTCAAAAAG TGATGTTTCC 12780

CTTTGGGATA CTGCTTTTTA ACGTAAGGCA GGTATTCTTT CGTTGTAATA ATAATCAATG 12840

GCTCTGTCAA ATGCTCCTCT GAAGGAGGAG GACTAATTAG AATATTGTAT CCTGTAACAG 12900

AGGCAACTTT GTCAGTAAAA TTCCGTAAAA TAATGGACTT TATTAAGTTT ACATCTGCTT 12960

GATTATTTAA AATGATAAAA ATCGGGATAG CAGGTAGTGA GGAAAAGATG GTTTCTGTCA 13020

AGTAGAGTGA GAAAAGGTAC AGCCGATGCT GGTCGATAAC TCCTTCAATC TTCTGCTCAG 13080

TCATCCACTC TTGAACAATT GCTTTCGAAA TATGATACAG TGGCTTGTCG CTTTCAATCC 13140

CATAATGTTC GTAATAATTA TAATAGGGAA CTAGATTTTG TAAACCAAAC AAAAACGTTC 13200

TTGTTAAGAA AGTCAGTGCT GTTAAAAAAG AAAGAGAATT CGAAATGTCA TTTCCTAAGA 13260

TATTCTTGAA CTTGGATAGT AGATGCTTTC CTCTTGTATG CTGAAGAATC AGTTGAATAG 13320

TATGAGTCTT TTTTTCTTGA TTCCATTTGT CCTTGGAAAA CGAAGAATTA GCAGAACAAT 13380

AAACCAAAAA GATATAATCC AGTTCTTCCT GAGTAAAAGT CATGTTGGCA TGTGGCTCTA 13440

AGTAAGTTTG GCAATGTTCC ATCAAAATCG GATACATAAA GAGGTTTTTT AATTTTTCAA 13500

ACTCTTTGGA CTCAGGGAAC TCAAGTGGAA ATTCCCGACG TTTCCAAGTG AGTGCCACTA 13560

GTATGCTAAA ATGAACATAC TCGTCAGGTG TGATTTCTAA CAGTTCATGA CTGAGTTGAG 13620

AATTAGACTG CACAATCATA TGTGTGACCC AATCCATACT TCCATCATTC AAATCATAAA 13680

TCTCAATACC AAAATGAAAC TGGAGGAGTG CAATTAAAAA ACGAATGCGA TATTCAGGAC 13740

CAACTACTTG ATTTTTCACA AGGTCCAAAC CTACTGAACG TAGTAACAAG CCACACTTTT 13800

GTCGTACGCG GTAGCCTGTT GCGATGGAAA TATACTCTTT TTGTGTAAAT TCGTTAAAGC 13860

TTTGATTACC TTGTAGTAGA AAGAAGCGGA GTATTTTTAA AATAGTTGAT TGGTTATAAA 13920

GCTGATGGAA GTAATAATTC GTTTGATGAG AATGGTGTTC GATTAATTGA ACTTGTTGCG 13980

TATCTAAATT AAATGTCAAC TCTTCCTCGA ATGTTTCTTG TAATTCCTGC AAAATGCTTA 14040

GGAGACTTTT AGATTGTAAT GAAGTTAAAG TAGACAGTTC ATCTAGTTCA ATAGACCGAA 14100

TATCCAATAA TATATTTAAA ATGGTAATTT TATCTGTAAT TCTTTTTTCA ATGTATTTGT 14160

TTAGCATAGT TACCGAATCT TAGTTGCATA TAGATAATTT TAATTATTAT AATACAAAAG 14220

AAACTAATTG TCTTGTCAAA AAGGTTGTGG AATTTCCGAC TTTATTGATA AAACAGCATG 14280

TAATAAAAGG CATTTTAAAG ATAGTAATGA GTATTGGTGG AGTTTTATGG CTTATTTTTT 14340

TTATTAGAAA ATATTTTTTT ATCAAATATT GTCGTTCTAT AAAAAAATAT GTGATAAAAA 14400

TATCTATTGT GATGGAAGTT GTTTTAATTT ATACTAGGAT AGTTAATAGT AATACTATAC 14460

TATACTATAT TGTATACAAG TGTGTCATTG CCAGGTTGAG AAGATAGCTA TAACGCACTT 14520

TTATACGCTT TTGCTACGTT TGTTAGTGAA CGGATTAACT CAGTGAGATA AATTTTATCA 14580

GAACATAAGT AATCCGTTTC TTCGTGTATA CAGATTGAAA GTACCTATGA ATCATAGAAG 14640

GATTAACTTG TTCTATGAAT AATGCTTAAC AGGGAGACAC ACATGAAAAA AGTAAGAAAG 14700

ATATTTCAGA AGGCAGTTGC AGGACTGTGC TGTATATCTC AGTTGACAGC TTTTTCTTCG 14760

ATAGTTGCTT TAGCAGAAAC GCCTGAAACC AGTCCAGCGA TAGGAAAAGT AGTGATTAAG 14820

GAGACAGGCG AAGGAGGAGC GCTTCTAGGA GATGCCGTCT TTGAGTTGAA AAACAATACG 14880

GATGGCACAA CTGTTTCGCA AAGGACAGAG GCGCAAACAG GAGAAGCGAT ATTTTCAAAC 14940

ATAAAACCTG GGACATACAC CTTGACAGAA GCCCAACCTC CAGTTGGTTA TAAACCCTCT 15000

ACTAAACAAT GGACTGTTGA AGTTGAGAAG AATGGTCGGA CGACTGTCCA AGGTGAACAG 15060

GTAGAAAATC GAGAAGAGGC TCTATCTGAC CAGTATCCAC AAACAGGGAC TTATCCAGAT 15120

GTTCAAACAC CTTATCAGAT TATTAAGGTA GATGGTTCGG AAAAAAACGG ACAGCACAAG 15180

GCGTTGAATC CGAATCCATA TGAACGTGTG ATTCCAGAAG GTACACTTTC AAAGAGAATT 15240

TATCAAGTGA ATAATTTGGA TGATAACCAA TATGGAATCG AATTGACGGT TAGTGGGAAA 15300

ACAGTGTATG AACAAAAAGA TAAGTCTGTG CCGCTGGATG TCGTTATCTT GCTCGATAAC 15360

TCAAATAGTA TGAGTAACAT TCGAAACAAG AATGCTCGAC GTGCGGAAAG AGCTGGTGAG 15420

GCGACACGTT CTCTTATTGA TAAAATTACA TCTGATTCAG AAAATAGGGT AGCGCTTGTG 15480

ACTTATGCTT CCACTATCTT TGATGGGACC GAGTTTACAG TAGAAAAAGG GGTAGCAGAT 15540

AAAAACGGAA AGCGATTGAA TGATTCTCTT TTTTGGAATT ATGATCAGAC GAGTTTTACA 15600

ACCAATACCA AAGATTATAG TTATTTAAAG CTGACTAATG ATAAGAATGA CATTGTAGAA 15660

TTAAAAAATA AGGTACCTAC CGAGGCAGAA GACCATGATG GAAATAGATT GATGTACCAA 15720

TTCGGTGCCA CTTTTACTCA GAAAGCTTTG ATGAAGGCAG ATGAGATTTT GACACAACAA 15780

GCGAGACAAA ATAGTCAAAA AGTCATTTTC CATATTACGG ATGGTGTCCC AACTATGTCG 15840

TATCCGATTA ATTTTAATCA TGCTACGTTT GCTCCATCAT ATCAAAATCA ACTAAATGCA 15900

TTTTTTAGTA AATCTCCTAA TAAAGATGGA ATACTATTAA GTGATTTTAT TACGCAAGCA 15960

ACTAGTGGAG AACATACAAT TGTACGCGGA GATGGGCAAA GTTACCAGAT GTTTACAGAT 16020

AAGACAGTTT ATGAAAAAGG TGCTCCTGCA GCTTTCCCAG TTAAACCTGA AAAATATTCT 16080

GAAATGAAGG CGGCTGGTTA TGCAGTTATA GGCGATCCAA TTAATGGTGG ATATATTTGG 16140

CTTAATTGGA GAGAGAGTAT TCTGGCTTAT CCGTTTAATT CTAATACTGC TAAAATTACC 16200

AATCATGGTG ACCCTACAAG ATGGTACTAT AACGGGAATA TTGCTCCTGA TGGGTATGAT 16260

GTCTTTACGG TAGGTATTGG TATTAACGGA GATCCTGGTA CGGATGAAGC AACGGCTACT 16320

AGTTTTATGC AAAGTATTTC TAGTAAACCT GAAAACTATA CCAATGTTAC TGACACGACA 16380

AAAATATTGG AACAGTTGAA TCGTTATTTC CACACCATCG TAACTGAAAA GAAATCAATT 16440

GAGAATGGTA CGATTACAGA TCCGATGGGT GAGTTAATTG ATTTGCAATT GGGCACAGAT 16500

GGAAGATTTG ATCCAGCAGA TTACACTTTA ACTGCAAACG ATGGTAGTCG CTTGGAGAAT 16560

GGACAAGCTG TAGGTGGTCC ACAAAATGAT GGTGGTTTGT TAAAAAATGC AAAAGTGCTC 16620

TATGATACGA CTGAGAAAAG GATTCGTGTA ACAGGTCTGT ACCTTGGAAC GGATGAAAAA 16680

GTTACGTTGA CCTACAATGT TCGTTTGAAT GATGAGTTTG TAAGCAATAA ATTTTATGAT 16740

ACCAATGGTC GAACAACCTT ACATCCTAAG GAAGTAGAAC AGAACACAGT GCGCGACTTC 16800

CCGATTCCTA AGATTCGTGA TGTGCGGAAG TATCCAGAAA TCACAATTTC AAAAGAGAAA 16860

AAACTTGGTG ACATTGAGTT TATTAAGGTC AATAAAAATG ATAAAAAACC ACTGAGAGGT 16920

GCGGTCTTTA GTCTTCAAAA ACAACATCCG GATTATCCAG ATATTTATGG AGCTATTGAT 16980

CAAAATGGCA CTTATCAAAA TGTGAGAACA GGTGAAGATG GTAAGTTGAC CTTTAAAAAT 17040

CTGTCAGATG GGAAATATCG ATTATTTGAA AATTCTGAAC CAGCTGGTTA TAAACCCGTT 17100

CAAAATAAGC CTATCGTTGC CTTCCAAATA GTAAATGGAG AAGTCAGAGA TGTGACTTCA 17160

ATCGTTCCAC AAGATATACC AGCGGGTTAC GAGTTTACGA ATGATAAGCA CTATATTACC 17220

AATGAACCTA TTCCTCCAAA GAGAGAATAT CCTCGAACTG GTGGTATCGG AATGTTGCCA 17280

TTCTATCTGA TAGGTTGCAT GATGATGGGA GGAGTTCTAT TATACACACG GAAACATCCG 17340

TAAAGTGTAG AAATGATAAT ATCTATGTTC TGAACGATAC TTTTAAGAAG TAGCACTCAA 17400

GAAGAGATTT AAGTTTACTT GGTGAAACCT GTTTTATTCG TAAGTAAACT ATCATTGAAA 17460

GGGGAGATGT TTTCGAAAAC TTGCACAGAA AAAGGATTAT TATTGTCATG TGTAATTCAT 17520

TACATTGCTC ACAGTTGATT TTAAGAGATA TGAATAAGGA GAAATCATGA AATCAATCAA 17580

CAAATTTTTA ACAATGCTTG CTGCCTTATT ACTGACAGCG AGTAGCCTGT TTTCAGCTGC 17640

AACAGTTTTT GCGGCTGGGA CGACAACAAC ATCTGTTACC GTTCATAAAC TATTGGCAAC 17700

AGATGGGGAT ATGGATAAAA TTGCAAATGA GTTAGAAACA GGTAACTATG CTGGTAATAA 17760

AGTGGGTGTT CTACCTGCAA ATGCAAAAGA AATTGCCGGT GTTATGTTCG TTTGGACAAA 17820

TACTAATAAT GAAATTATTG ATGAAAATGG CCAAACTCTA GGAGTGAATA TTGATCCACA 17880

AACATTTAAA CTCTCAGGGG CAATGCCGGC AACTGCAATG AAAAAATTAA CAGAAGCTGA 17940

AGGAGCTAAA TTTAACACGG CAAATTTACC AGCTGCTAAG TATAAAATTT ATGAAATTCA 18000

CAGTTTATCA ACTTATGTCG GTGAAGATGG AGCAACCTTA ACAGGTTCTA AAGCAGTTCC 18060

AATTGAAATT GAATTACCAT TGAACGATGT TGTGGATGCG CATGTGTATC CAAAAAATAC 18120

AGAAGCAAAG CCAAAAATTG ATAAAGATTT CAAAGGTAAA GCAAATCCAG ATACACCACG 18180

TGTAGATAAA GATACACCTG TGAACCACCA AGTTGGAGAT GTTGTAGAGT ACGAAATTGT 18240

TACAAAAATT CCAGCACTTG CTAATTATGC AACAGCAAAC TGGAGCGATA GAATGACTGA 18300

AGGTTTGGCA TTCAACAAAG GTACAGTGAA AGTAACTGTT GATGATGTTG CACTTGAAGC 18360

AGGTGATTAT GCTCTAACAG AAGTAGCAAC TGGTTTTGAT TTGAAATTAA CAGATGCTGG 18420

TTTAGCTAAA GTGAATGACC AAAACGCTGA AAAAACTGTG AAAATCACTT ATTCGGCAAC 18480

ATTGAATGAC AAAGCAATTG TAGAAGTACC AGAATCTAAT GATGTAACAT TTAACTATGG 18540

TAATAATCCA GATCACGGGA ATACTCCAAA GCCGAATAAG CCAAATGAAA ACGGCGATTT 18600

GACATTGACC AAGACATGGG TTGATGCTAC AGGTGCACCA ATTCCGGCTG GAGCTGAAGC 18660

AACGTTCGAT TTGGTTAATG CTCAGACTGG TAAAGTTGTA CAAACTGTAA CTTTGACAAC 18720

AGACAAAAAT ACAGTTACTG TTAACGGATT GGATAAAAAT ACAGAATATA AATTCGTTGA 18780

ACGTAGTATA AAAGGGTATT CAGCAGATTA TCAAGAAATC ACTACAGCTG GAGAAATTGC 18840

TGTCAAGAAC TGGAAAGACG AAAATCCAAA ACCACTTGAT CCAACAGAGC CAAAAGTTGT 18900

TACATATGGT AAAAAGTTTG TCAAAGTTAA TGATAAAGAT AATCGTTTAG CTGGGGCAGA 18960

ATTTGTAATT GCAAATGCTG ATAATGCTGG TCAATATTTA GCACGTAAAG CAGATAAAGT 19020

GAGTCAAGAA GAGAAGCAGT TGGTTGTTAC AACAAAGGAT GCTTTAGATA GAGCAGTTGC 19080

TGCTTATAAC GCTCTTACTG CACAACAACA AACTCAGCAA GAAAAAGAGA AAGTTGACAA 19140

AGCTCAAGCT GCTTATAATG CTGCTGTGAT TGCTGCCAAC AATGCATTTG AATGGGTGGC 19200

AGATAAGGAC AATGAAAATG TTGTGAAATT AGTTTCTGAT GCACAAGGTC GCTTTGAAAT 19260

TACAGGCCTT CTTGCAGGTA CATATTACTT AGAAGAAACA AAACAGCCTG CTGGTTATGC 19320

ATTACTAACT AGCCGTCAGA AATTTGAAGT CACTGCAACT TCTTATTCAG CGACTGGACA 19380

AGGCATTGAG TATACTGCTG GTTCAGGTAA AGATGACGCT ACAAAAGTAG TCAACAAAAA 19440

AATCACTATC CCACAAACGG GTGGTATTGG TACAATTATC TTTGCTGTAG CGGGGGCTGC 19500

GATTATGGGT ATTGCAGTGT ACGCATATGT TAAAAACAAC AAAGATGAGG ATCAACTTGC 19560

TTAAGTAAGA GAGAAAGGAG CCATTGATGA CAATGCAGAA AATGCAGAAA ATGATTAGTC 19620

GTATCTTCTT TGTTATGGCT CTGTGTTTTT CTCTTGTATG GGGTGCACAT GCAGTCCAAG 19680

CGCAAGAAGA TCACACGTTG GTCTTGCAAT TGGAGAACTA TCAGGAGGTG GTTAGTCAAT 19740

TGCCATCTCG TGATGGTCAT CGGTTGCAAG TATGGAAGTT GGATGATTCG TATTCCTATG 19800

ATGATCGGGT GCAAATTGTA AGAGACTTGC ATTCGTGGGA TGAGAATAAA CTTTCTTCTT 19860

TCAAAAAGAC TTCGTTTGAG ATGACCTTCC TTGAGAATCA GATTGAAGTA TCTCATATTC 19920

CAAATGGTCT TTACTATGTT CGCTCTATTA TCCAGACGGA TGCGGTTTCT TATCCAGCTG 19980

AATTTCTTTT TGAAATGACA GATCAAACGG TAGAGCCTTT GGTCATTGTA GCGAAAAAAA 20040

CAGATACAAT GACAACAAAG GTGAAGCTGA TAAAGGTGGA TCAAGACCAC AATCGCTTGG 20100

AGGGTGTCGG CTTTAAATTG GTATCAGTAG CAAGAGATGT TTCTGAAAAA GAGGTTCCCT 20160

TGATTGGAGA ATACCGTTAC AGTTCTTCTG GTCAAGTAGG GAGAACTCTC TATACTGATA 20220

AAAATGGAGA GATTTTTGTG ACAAATCTTC CTCTTGGGAA CTATCGTTTC AAGGAGGTGG 20280

AGCCACTGGC AGGCTATGCT GTTACGACGC TGGATACGGA TGTCCAGCTG GTAGATCATC 20340

AGCTGGTGAC GATTACGGTT GTCAATCAGA AATTACCACG TGGCAATGTT GACTTTATGA 20400

AGGTGGATGG TCGGACCAAT ACCTCTCTTC AAGGGGCAAT GTTCAAAGTC ATGAAAGAAG 20460

AAAGCGGACA CTATACTCCT GTTCTTCAAA ATGGTAAGGA AGTAGTTGTA ACATCAGGGA 20520

AAGATGGTCG TTTCCGAGTG GAAGGTCTAG AGTATGGGAC ATACTATTTA TGGGAGCTCC 20580

AAGCTCCAAC TGGTTATGTT CAATTAACAT CGCCTGTTTC CTTTACAATC GGGAAAGATA 20640

CTCGTAAGGA ACTGGTAACA GTGGTTAAAA ATAACAAGCG ACCACGGATT GATGTGCCAG 20700

ATACAGGGGA AGAAACCCTT GTATATCTTG ATGCTTGTTG CCATTTTGTT GTTTGGTAGT 20760

GGTTATTGTC TTACGAAAAA ACCAAATAAC TGATATTCAA TGTACATCAT TATGAATAGG 20820

ATAGCAGGCT GAAGGGAAGA CCAGAGTACT CTGAGGTGAT GTTAATCAGG AATCATGGTG 20880

ATGTGGCATG AATCATCAAT AACGGATATG AGGCTGGGCA GATTGTGCCA GCCTCATTGT 20940

GGGTTATTGT TTGTAAAACG ATAGGACTGG TCTGGTAATC ATTTTA 20986

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 21040 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

CCCAGCAAAA AGCCATCCGA AGATGACTTT TTTGCTATTT AATTTCTGTA TAAGTTACTT 60

CCAAGCCACG CTTAACAGCT GGACGATTGG CAATTTTTTC TGCCCATTTT ACTAGATTTT 120

GATAACTTGA GGCATCCAAG AATTTTGCAG AACCTTGGTA AAGATTTCCT TGAACTAACT 180

GTCCATACCA AGACCAGATA GCAATATCTG CAATCGTATA GTCATTGCCT GCAATATAAG 240

GTTTCTGAGC CAATTCCTTA TCCAATAAAT CCAACTGGCG TTTCACTTCC ATCGTAAAAC 300

GGTTAATAGG ATATTCCAAT TTTTCAGGAG CATAATTGAA GAAATGTCCA AATCCCCCAC 360

CTAGAAAAGG TGCTGCACCT GCTTGCCAGA ATAGCCAATT CAAAACTTCT ACCTTTTCCA 420

CAGGATTACT TGGTAAAAAG GCTCCAAATT TCTCAGCAAG GTAAAGAAGA ATATGAGCAG 480

ACTCAAAGAC TCTTACGTTT TCAGTACCTG ACTGGTCCAA TAAGGCTGGA ATCTTGGAAT 540

TTGGATTGAG CTTCACAAAG TCTGATCCGA ATTGATCCCC ATCCATGATA GCAATCTTAT 600

ACAAGTCGTA AGCCGCTTCC TTAAAACCAG CTTCTAGTAA TTCTTCCAAT AAGATAGTAA 660

CCTTCACACC ATTTGGTGTT CCCAGTGAAT AAAGCTGAAA AGCTTGTTCT CCTTTTGGCA 720

AGTTTTGTTC GAAACGGGCA CCTGCTGTTG GTCTGTTTAG CCCCGTAAAA GCTCCTTGAT 780

TACTAGCTTC ATCCTGCCAT ACGGTCGGTA ATTGATATGC TGACATCCGA AACCTCCCTT 840

AAATCGCATT CTTGTCAAAA CCGAGTTTGC GTTGAATAAA CTTAACGATT TCGACGATGA 900

TAATCATTGA GAAGCTTCCA GCCATAACAA TTCCCCATTG TGACAAGTCT AGTTTGGTTA 960

CGTGGAAGAT TCCTTCAAGC GGTTCTACAA CGATTGTTGC CATGAGAAGG ATAAAGGATA 1020

CCAAGATGGA CCAGTTAAAG GTCTTAGACT TGAATGGGCC AACTGTCAAG ATGGATTGGT 1080

AGACAGACTT GACATTGTAG GCATGGAAGA GCTGAATCAA ACCAAGGGTT GCAAAGGCCA 1140

TCGTTAGGGC ATCTGCATGA ATAGCATGAT TGTCACCCAC ATGAACTGGG TAAGCAATCG 1200

CAAGGCCATA AACACTCATA ACAAGAGCTG CTTGGAGTAC ACCTTGATAA ATGATAGAAC 1260

TCAAAACACC ACCTGAGAAG AAGCTTGCCT TGCGTCCACG TGGTTTATGA TTCATGACAC 1320

CAGGTTCCGC AGGTTCAACA CCAAGAGCGA TAGCTGGGAA GGTATCCGTT ACCAAGTTGA 1380

TCCACAAAAG ATGAACCGGC TGTAAGACAT CCCAACCAAA CAAGGTTGAT AGGAAGATGG 1440

TTAATACTTC AGCAGTATTA GCAGAAAGTA GGTACTGAAT AGTCTTTTGA ATGTTTGAGA 1500

AGACCTTACG TCCTTCTTCC ACTGCGACGA TAATAGTCGC AAAGTTATCA TCTGCAAGAA 1560

TCATATCAGA AGCCCCCTTA GAAACCTCTG TACCAGTGAT TCCCATACCG ATACCGATAT 1620

CGGCTGTTTT CAGAGCTGGC GCGTCATTGA CACCGTCACC TGTCATGGCA ACGACTTTAC 1680

CTTGTTTTTG CCAAGCCTTG ACGATACGAA CCTTGTGTTC TGGAGACACA CGGGCATAAA 1740

CAGAGTATTG ACCAACGACT TTTTCAAATT CTTCATCTGA CAGTTCATTG AGTTCAGCAC 1800

CAGTTAAAAC GTGACCTTCT GTATCGTTTG CGTCAATGAT TCCCAAACGT TTGGCAATGG 1860

CTTCCGCTGT GTCTTGGTGG TCACCTGTAA TCATAATTGG ACGGATTCCC GCTTCCTTAG 1920

CCACACGAAC AGCCTCAGCG GCTTCAGGAC GTTCAGGGTC AATCATCCCA ATCAAACCAG 1980

TAAAAATTAA ATCATTTTCA AGCTCTTCAG AAGTGAGATT TTCTGGAATA CTATCGATAA 2040

TCTTATAAGC ACCTGCAAGG ACACGCAAGG CTTGATGAGC CATTTCAGAA TTGTTTGTAC 2100

GAATGAGATT TGTAACCTTC TCATCAATCG GAGCAATATC CCCAGCCTTA TCACGAAGAA 2160

GACAACGTTT TAAGAGTTGG TCTGGCGCAC CCTTGACTGC TACAAGGAAA CGACCATCTG 2220

GCAATGGGTG AACTGTTGAC ATGAGCTTAC GGTCAGAGTC AAATGGCAAT TCAGCTACAC 2280

GAGGATATTT CTCTAAGAAA CCTTTGACAT CATAGCCCTT GTCCAAGGCA TATTGGATAA 2340

AGGCTGTTTC GGTTGGGTCA CCAATCAAGT TACCTTCCAC ATCGATTTTC GTATCATTGG 2400

CCAAGACAAC TGAACGAAGT AGTGGCATTT CAAGACCTAG TTCAATATCA TCAGCTGAGT 2460

CATGTAGAAC CGCATCGTAG AAGACTTTTT CGACTGTCAT CTTGTTCATA GTCAGCGTAC 2520

CAGTCTTATC AGAAGCGATG ATTTCAGTTG AACCAAGTGT TTCAACTGCT GGCAACTTAC 2580

GAACGATGGA ATGTCGTTTG GCCAAAACTT GAGTACCAAG AGAAAGAACG ATGGTAACGA 2640

TAGCAGGAAG TCCTTCTGGA ATGGCTGCAA CGGCAAGGGC AACAGAAGTC AACAACTCAC 2700

CAAGTGGATT TTTCCCTTGA ATGAAGACAC CCACTACAAA AGTAACAAGG GCAATGACCA 2760

AGATAGCATA GGTCAAGACC TTAGAAAGGT TGTTCAAATT TTGTTTGAGT GGTGTATCAG 2820

TCTCATCCGC ATCTTGAAGC ATACCAGCAA TATGACCAAC TTCAGTGTAC ATACCTGTAT 2880

TGACAACAAC ACCCATCCCA CGACCATAGG TTACGTTTGA GTTTTGGAAG GCCATGTTGA 2940

CACGGTCACC AATACCAGCA TCTGTCGCAA GCTCGACTGA CAAGTCTTTT TCGACTGGTA 3000

CAGATTCACC TGTCAAGGCT GCTTCTTCAA TTTTAAGAGA GTTGGCTTCT ATCAAACGTA 3060

GGTCCGCTGG TACCACGTCA CCTGCTTCAA GGGCAACGAT ATCGCCTGGT ACCAATTCTT 3120

TAGAGTCAAT CTCTGCCATG TGTCCATCAC GAAGAACGCG GGCAACTGGA CTAGACATGG 3180

ATTTGAGGGC TTCAATAGCT TCTTCAGCTT TTCCTTCTTG GTAAACACCA AAGGCAGCGT 3240

TGATGATAAC CACAGCTAGG ATGATAATGG CATCTGCGAT ATCTTCCCCA CCAGAAGTCA 3300

CGACTGACAA GATTGctGCC GCAACTAGGA TGATAATCAT CAAATCCTTA AATTGCTCGA 3360

TGAATTTGAC CAAGATTGAT CGTTTCTCGC CTTCTTCGAG TTCATTGTGC CCAAATTCGG 3420

CAAGGCGCTT TTCCGCCTCA CTTGATGACA AACCTTGCTC GGTCGCATCC ACAGCCTGCA 3480

AGACCTCTTC AGGGCTCTGA GTATAAAACG CTTGGCGTTT TTGTTCTTTT GACATGTGTC 3540

TCCTCCTTGA CATTGTGTGC AAAACAGACT CTCTTTCTGT CATAGCTTTT CACGACAAAC 3600

AAAAAGAAAC CTGTTAATCA TAACAAGTCT CGCTGTTTAA GATAGGGCCG GAAAGCATAC 3660

TTTTCAGCAT AAAATTCGGA ATGACGACAC TATCACAGGT TTCTGCCAGC TACTCCCTTG 3720

AGTAGTACCA TTATACCAAA TTTTGGGGAG TTTTCAAAGA GTAAAAACTG CCTTATTTGA 3780

ATTTTTCCTT GAAAACCAGT ATAATGGTAG AATGCTATGT GACTAGAAAG GAAGTTGAAT 3840

GAAGCAATCT ATCTCAAATC TCAAGTTAGC TGAGCGTGGA GCCATTATCA GTATTTCGAC 3900

CTATTTGATC TTGTCTGCAG CCAAATTAGC AGCTGGTCAT CTCCtTCATT CATCCAGTTT 3960

GGTGGCCGAT GGTTTTAATA ACGTATCGGA CATCATTGGA AATGTGGCCC TCTTAATCGG 4020

GATTCGGATG GCGCGCCACC TGCAGACCGT GACCACCGTT TTGGTCATTG GAAGATTGAA 4080

GATTTGGCAA GCTTGATCAC TTCTATCATC ATGTTCTATG TCGGTTTCGA TGTTCTAAGA 4140

GATACCATTC AAAAGATTCT CAGTCGGGAA GAAACGGTCA TTGATCCTCT TGGTGCAACT 4200

CTAGGAATCA TTTCTGCAGC GATTATGTTT GTGGTCTATC TCTACAATAC TCGCCTCAGT 4260

AAGAAATCCA ACTCCAATGC GCTGAAGGCA GCTGCTAAGG ACAATCTTTC TGACGCTGTT 4320

ACCTCACTTG GAACCGCCAT TGCCATCCTA GCTAGTAGTT TCAATTATCC GATTGTGGAT 4380

AAACTGGTTG CTATCATCAT CACTTTCTTT ATCTTGAAGA CTGCCTATGA TATCTTCATC 4440

GAGTCTTCCT TTAGTCTTTC AGATGGCTTT GACGACCGCC TGCTCGAGGA CTACCAAAAG 4500

GCTATCATGG AAATTCCCAA AATCAGCAAG GTCAAATCGC AAAGAGGTCG CACCTACGGT 4560

AGCAACATCT ACCTGGATAT TACACTAGAG ATGAATCCTG ACTTGTCTGT TTTTGAAAGC 4620

CATGAAATCG CGGATCAGGT CGAGTCTATG CTGGAGGAGC GTTTTGGCGT CTTTGATACC 4680

GATGTCCATA TCGAACCAGC ACCTATCCCT GAGGATGAAA TTTTAGACAA TGTCTATAAA 4740

AAATTGCTTA TGCGTGAACA ATTGATTGAC CAAGGAAACC AACTAGAAGA ACTCTTGACT 4800

GATGATTTTG TCTATATTCG CCAAGATGGA GAGCAGATGG ATAAAGAGGC TTATAAGACC 4860

AAAAAAGAGT TAAATTCTGC TATCAAGGAC ATTCAAATTA CTTCCATCAG TCAAAAAACC 4920

AAACTCATCT GCTATGAGTT AGATGGTATC ATCCATACCA GTATCTGGCG TCGCCACGAA 4980

ACCTGGCAAA ATATCTTTCA TCAAGAAACC AAAAAAGAAT AGAGAAATCC TTTCATGAGA 5040

CGGGATTTTT CTATTCTTTT ATACTCAATA AAAATCAAAG TGCAAATTAG GAAGCCGGTC 5100

ACAGGCTGTA CTTGAGTCGG CAATGTGAAG CCGACATAGT TTGCACTTTG ATTTTCGAAT 5160

AGTCTTAACT ATCAAATTCA CTGAGATACT CATAGCGTTC GTATTTTTCA AGGAGTGCTT 5220

CATTTTTCTC ATCCAATTCT TTTTGGAGAG TAGCCAGCTT ACCAAAGTCA GAGCCGTTAG 5280

CCTGCATTTC CTCTTCAATA GCAGCGATAC GTTTTTCCAA GGTTTCAATA TCACCTTCAA 5340

TACTTGCCCA CTCCTGCTTT TCTTGGTAGG TCATGCGTTT CTTGTCTTCT CGAACCTTGA 5400

CCACTTTTTC CTTTTCGGCC TTTTGCACTT GATTGGCCAT ATCTGTTTCA AAAGCTTTTT 5460

CATCAAGATA GTCGGTGTAA TGACCAAAGA AAGGACGAAT CTTGCCATCC TCAAAAGCGA 5520

GAATCTTGGT CGCTACCTTA TCCAAGAAAT AGCGGTCGTG ACTGACTGTT AAAACGGGAC 5580

CTGCAAAACC TTGCAAGAAA TTCTCTAAGA CTGTCAAAGT TGCAATATCT AGGTCATTGG 5640

TTGGCTCGTC TAAAAGAAGA ACATTTGGTT TTTCCAAAAG CAGTTTGAGG AGATAAAGAC 5700

GTTTTTTCTC ACCCCCTGAC AATTTCTCAA TCAAAGTCCC ATGCGTCGAA CGTGGGAAGA 5760

GGAATTGCTC CAGCAACTCA GCGATGGAAG TCGTAGAACC ACCACTGGTC TTGACCTCCT 5820

CTGCCACTTC CTGCAGGTAA TTGATCACAC GCTTGCTTTC ATCCAAACCC TCAATTTGTT 5880

GAGAGAAATA GGCGATGCGA ACAGTTTCCC CAATCACAAC TTGTCCTGCT GTCGGCTCAA 5940

GACTTCCTGC AATCAGGTTA AGTAGGGTTG ATTTTCCAAC ACCATTGTCC CCAACAATTC 6000

CAATACGGTC TTTAGCCTGA ACTAAGAGAT TAAAATTTTG CAAAATGGGC TTATTTTCAT 6060

AGGCAAAGGA AACATCCTGA AACTCGATGA CTTTCTTCCC AATCCGACTG GTTTCAAAGT 6120

TCATAGTCAA GTCTGTCTCA GCACTACTGC CTGAAACTTC CTTTTTCAGA TCATGGAAAC 6180

GATTGATACG AGCTTGTTGC TTGGTCGCAC GCGCCTGCGG TTGTCTGCGC ATCCAGGCCA 6240

ATTCTTGTTT GTAGAGTTGT TCTTTTTTGT GAAGAAGAGC CGCGTCGCGC TCATCCTGTT 6300

CCGCCTTTAG GCGAACATAG TCCTGGTAAT TTCCCTGGTA CTCGGTCAAG CCTGCACGAT 6360

CCAACTCGAA AATCCGTGTT GACAAAGCGT CTAAGAAATA ACGATCGTGA GTGATAAAAA 6420

GGACGGTCTT CTTAGAATTT TTCAAAAAGA GGGTCAGCCA CTCAATAATC GCAATATCCA 6480

GATGGTTGGT CGGCTCATCC AAAAGCAAGA GGTCGTGGTT GCCAAGTAAG ACTTGTGCCA 6540

ACTGTACCCG TCTTCTCAGA CCACCTGACA ATTCCCCAAC AGGAGTAGAT AAGTCTTGAA 6600

TGCCCAATTT GCTAAGAACG GTCTTGACCT GACTTTCGAT TTCCCAAGCT TGGAGAGAGT 6660

CCATCTCTGC CATGACACGT TCCAAACGCG CCTGCTTGTC CTCACTATAG TCGAGCATAA 6720

TCAATTCATA CTCACGAATG AGCTGGATTT CCTTGAGTTC ACTAGATAGA ACCGTATCCA 6780

AAACTGTCTT TCTATCATCA AAATCAGGAT CCTGAGTCAA GTAACCAATC TGGTAATCAT 6840

TTTTAGCTGA AAAAGGACTG ACATCCCCAT CAAATCCAGA AACACCAGAA AGGACGTCCA 6900

AAAGGGTGGT CTTGCCAGTC CCATTGACAC CGATTAAACC AATTCTGTCT AAGTCATGGA 6960

TAATAAAGGA AATATCCCTA AAAACGGTCT TGTCACCAAC GGATTTACTT AGTTTTTCAA 7020

CGATAAAATC ACTCATTTTT TCTCCCTCAG GTAAGCATGG ATGGCTTCAC GATTATTCTC 7080

CAATTCTCCA TCGACAATGG CAAACTCAAT CTCTGTTAAA ATCTCTCCCA AGTCTGGGCC 7140

TGGCTGATAG CCATATTCCT TGATCAAAAT ACCGCCATTA ATCTGAATCT CTTTCTTGTC 7200

ATGGATAGTC AAGCTTTGGT ATTTTTCTGT GATGGCTTGT GGGTTGACTT CTTTTCCTTG 7260

AGCTTGACGA AGATTTTCAG CCTGTAAAAG CAAATCTATG TCAAAGCGAT AACAATCTCG 7320

CTTGCTCAAT TCTCCATTTT CACGCAGAGC CAAAATAATC AGCAAATCCT GAACTTGCTT 7380

GGCAAACTGG CGTGAGGTCT TCCAAGATTT CAAAAATGAC TGCGCATTTT CAATCTCCAA 7440

AGCCCATAGT AAAGCCGCCC AGGCTTGTTC AGAGGATTCA AAAGTAAAAT CAGTCTCCAA 7500

ATCAAACAGT CTGTTGAGCT TGTCCTGGCT AGATGCCATA TCAGGGAGAT AGTCATAAGC 7560

TTGACTCTCA ATCATGGAAG CCAAGCCCCT TCTCCAAAAT GGAGCCAGCA AGAGTTTATC 7620

AAACTCGACG AAGGTACGCT CTACAGAAAT TTTCTCCAAA AGCGGCGTCA AGGTCTTCAT 7680

AGCTTTAAAT GTTTCTGGCT CAAGTGCAAA ACCAAGACTA GCCTGAAAAC GGAAACCACG 7740

CATAATCCGT AAAGCATCTT CGTTGAAACG CTCACTAGCC ACTCCAACTG CTCGCAAGAC 7800

TTGCTTTTCC AAATCTTCTA AACCATGGAA CAAGTCAACG ATTTCTCCTG TCTCATCCAA 7860

GGCAAAGGCG TTGACTGTGA AATCACGGCG TTTGAGGTCT TCTTCTAGCG ATCGTACAAA 7920

GGAAACCGCA CTGGGTCTGC GATAGTCCAC ATAGACATCC TCTGTCCGAA AGGTTGTTAC 7980

CTCATACTCC TCATCCCCAT CTAAGACCAA GACGGTTCCA TGCTCGATTC CGATATCGGC 8040

TGTTCGCGGA AAAATCTGCT TGGTCTCTTC TGGATAAGAA GACGTCGCAA TATCCACATC 8100

GTGGATAGGG CTATGGAGAA GGGCATCTCG AACAGAGCCC CCAACAAAAT AAGCCTCAAA 8160

GCCTGCTTCT TTAATTTTTT CTAATACTGG TAAAGCCTTC TGAAATTCAG AAGGCATTTG 8220

CGTTAATCTC ATAATAAGTG TTCTAATCCA TAGACAAGCT CATGACGCTT GACAACTTCT 8280

TTAATTCCCA AATTGACTCC TGTCATGAAG GAGATGCGAT CATAGGAGTC ATGACGGAGG 8340

GTCAACCCTT CTCCCTGATT GCCAAAGATG ACTTCCTGAT GAGCTACCAA GCCTGGCAAA 8400

CGAACTGAGT GGATGCGCAT ACCATCAAAG TCAGCACCAC GAGCACCAGC AATCAGCTCT 8460

TCCTCATCTG CTGCACCTTG CTGAATTGAC TCTCGAACCT CTGCCATCAA CTCAGCTGTT 8520

TTAATGGCTG TTCCACTCGG AGCATCCTTT TTCTTGTCAT GATGGAGCTC AATAATCTCC 8580

ACATTTGGGA AATATTTGGC AGCCTGCGTC GCAAATTGCA TGAGTAAGAC AGCACCCAAG 8640

GCAAAGTTAG GGGCAATCAG GCCACCCAAG TCTTGGGCAC GAGAAAATTC TTTTAGCTCT 8700

GCAATTTCTT CACTCGTGAA ACCAGTCGTT CCAACTACTG GAGCAAAGCC ATTTTCAAGA 8760

GCAAAACGTG TATTTTCGTA GGCAACAGCT GGAGTAGTAA AATCTACCCA GACATCCGCT 8820

TCAAAACCAG CTAAATCAGC CTTATCCTTG AAAACAGGAA TACCCTGCCA TTCTGACTCA 8880

GACTCAAAAG GATCCAAAAC TGCCACCAAG TCCAAGTCTG GATCAGTCAA TACCATCTGA 8940

CAAGCAGCCT GGCCCATCTT TCCCTTAAAA CCGGCAATAA TTACTCGAAT ACTCATCTCT 9000

ACTCCTGTCT AAGATACAAA GTCCGTAAGA ACACAAAGTG AAAATAGGAA TTCCAATCAA 9060

GAAGTGTCTA CTTCTTGGAA GAACTATCTT TTTCACACAG GGTTCCAGGC GTGTTCAATT 9120

ATCAAGATAC AAAGGACCTT AGCTGCCTCT GAAAAATAGG GAATGGCACT GACTTTCCAC 9180

GAAAGGCAAG ACAGGCATCT TTTTTCAAGA GGCAGGTAGT CCGTGTTCAA TTTCTAAGAT 9240

ACAAGGCATC TTAACTAGCC TAGAAGCGCC AACTAAATCA CTGGAATATA ACCCAGAGCA 9300

ATACTTCCTG CTCCTAGGTG CGTTCCAATG ACACTACCAA ATGTAGCAAG TGAAACATCC 9360

GAACCCAAGC CAAAATCAAG CAAGTGcTGA CGCAATTCTT CAGCCTTTTC AGGAGCATTC 9420

CCATGAATGA CAATGACCCG GTATTGACCT GAAGCCGTTG TTTCCTTGAT AATTTCAATT 9480

AAGCGCTTGG TGGCCTTCTT TTCAGTACGA ACTTTTTCGT AAACTTCAAT CACACCTTGA 9540

TCGTTAAAAT AAAGGATTGG CTTAATGCTA AGCAAATTGC CCAAAATGGC AGCCCCATTT 9600

GAAAGGCGTC CACCTTTTAC CAAATGATCC AAGTCATCTA CCATGATAAA GGCTGACGTA 9660

CGGCTGATTT GAATGGCTAG CTTATCCTGA ATGCTGGCAA AATCATCGCC CTGATCACGC 9720

CAATTAAAGA CGCTTTCAAC CATGATGCCT AGGGGAGCAC TTGTAATCAA AGTGTCTGGG 9780

AAAGCAATGG TTAAGCCCTC ATAGTCATCG ACCATATACT GGATATTTTG GTAAAAACCT 9840

GAAATTCCAG AAGATAGGAA AAGCCCCAAG GCATGTGTAT AGCCTTGTTC TTTGAGCGAA 9900

GTTAAGATCT CATCTAACTT GGCAATACTT GGTTGACTGG TCTTAGGCAA TTCAGAAGCC 9960

TGAGCCATTT TTTGGTAAAA TTCCTCAGCA GACAGATTGA TGCCTTCGAC ATATTCCTCA 10020

CCATCAATAT TGACAGGAAT ATCCAAGACA AACAAGTCTT CTCTTTGCAA GATCTCTGCA 10080

CTGAGATAAG CAGAGGAATC TGTGAAAACA GCTAATTTCA TATTAGAACT CCAAATTAAT 10140

TCCTGGTAAG TCTAATGCAA TTTCAGTCAC TTCGTAAGTC AAACGATTGA GCATGTTCAA 10200

ACATGGACGA GCCAAGGTTT CCACCTCTTC TTGGTTCAAT TCACTTGGTT CATTGACAAT 10260

ACGGCCATCG ATATGGTTTA CTTGTGAGAT TGTTCCACTA ATGACAAACT TATCAAATAC 10320

AATCATAAAG CTCAAGATGA CAATCAAGGA AGTCACTTGA TTTTCTTGGT CATGTTGGAG 10380

CAATTGGAAA TTCACATCCA CCTTGGTTTC AGGAGCTCCA TTTTCATTTT CCCATTCAAA 10440

ATTACGCGCA TCAAAATGAT ACTGACTAAC AAATTCTTGT TCACGTTTAA GATTCATGTC 10500

TTTCTCCATC GGCTACAATA TTATAAGCTA TTGTACCATA ATTTTTTATT TTCATCTAGT 10560

TTTCTAGGAT TTAGTCAATC CCAATTTCAG CACGAACTAC ATCTGTGATG GTATCAACAT 10620

AGTAGTTTAC TTCTTCTGTT GTAGGCGCTT CTGCCATAAC ACGCAAGAGG GGTTCTGTTC 10680

CACTTGGACG AACAAGGATA CGGCCGTTCC CCGCCATTTC TTCTTCCATC TTCTCGATGA 10740

TGGCCTTGAT AGCTGGCACT TCCATGGCCT TTTCCTTCAT GACGTTTTCC ACTCGGATAT 10800

TAACTAATTT TTGTGGATAA ATCGTTACTT CTGCCGCCAA CTCTGATAAG CTCTTACCAG 10860

TTTCCTTCAT GATTTTAGTC AATTGAACTG CTGATAATTG ACCATCACCT GTGGTATTGT 10920

AATCCATCAA GATAACGTGA CCAGACTGTT CACCACCAAG GTTGTAGCCT GATTTTCTCA 10980

TTTCTTCAAC AACGTAGCGG TCACCAACTG CAGTAACTGC CTTGTTAATA CCTTCGCGAT 11040

TCAAGGCCTT GTGGAAACCA AGGTTAGACA TAACAGTTGT CACAATTGTA TTTTGAGCCA 11100

ATTGTCCTTT TTCAGAAAGG TATTTTCCGA TGATGTACAT AATCTTGTCA CCATCAACGA 11160

TGTCACCATT CTCATCAACA GCAATCAAGC GGTCACTGTC TCCATCAAAG GCCAAACCAA 11220

TAGCTGACCC ACTTTCTTTG ACCACTTCTT GAAGGGCTTC TGGATGTGTT GAACCAACAT 11280

TAAGGTTGAT GTTAAGACCG TCTGGTGTTT CCCCGATAAC CGTCAATTGG GCACCAAGGT 11340

CTGCAAAGAT TTGACGGGCA CTGGTAGAAG CTGCTCCATT AGCTGTATCC AAGGCAACCT 11400

TCATTCCATC AAGAGGAGTT CCAGTTGAAA CAAGGTATCC TTCATACTTA CGCArGCtTC 11460

TGGATAATCT ACCAAAATTC CTAAGCCTTC TGCACTTGGA CGAGGAAGAG TGTCTTCCTC 11520

AGCATCTAGC AAGGCTTCAA TTTCTGCTTC TTTTTCATCA TCTAGTTTGA AGCCATCACC 11580

GCCAAAGAAC TTGATTCCGT TATCAAGGGC TGGGTTGTGG CTAGCAGAAA TCATGACACC 11640

GGCACTTGCT CCTTCAGTTT CAACCAAGTA AGCTACTGCT GGTGTTGCAA GGACACCAAG 11700

TTTGTATACG TGAATCCCTA CTGAAAgGAG ACCTGCCACC AAGGCCGATT CCAACATTTC 11760

CCCTGAAATA CGTGTGTCAC GTCCTACAAA GACTTTCGGC GCTTCCGTTT CATGTTGACT 11820

AAGAACATAG CCTCCAAAAC GTCCTAGTTT AAAGGCTAAT TCTGGTGTTA GTTCTAGGTT 11880

AGCTTCTCCA CGGACTCCAT CAGTCCCAAA ATATTTACCC ATTGTTATAA AATCCTTTTC 11940

TATTTTTAAT TCGTTTTTGA ACTAGTTGCT TTCGTTGACG AAGATGTCTC CGATGAACTG 12000

CTTGTACTTG AATTTGATGT GCTTGAACTT GGTGCTACTG GTTTTGTAGT CACCTTCATT 12060

ATTGTATCAA ACGGAGTGAT AACTGCCGGT AAGACAACAC CATTGCGGTC GATTGCCTGC 12120

AAAGGTACTG AACCACTGTA ATTACCTGTT ATACGTTCGC TAGTTGGCAA AACAGCGATA 12180

ATCTTATCAA TTCTATCCAA TGTCTCTTGG TCACTCGTAA TAGACACTTC TTTATCTGAC 12240

ACCATGACAT TTTCAATTTG TACCCGACTA TCAATTTGAC TAGGGTCAAT CTCTGGTACA 12300

ATCTTTACCT TATCCTTCTG AGCCTTCTTA CCAATCTTGA CTGTAATTTT TTGCGGAGTC 12360

GCCACAGCGG TCAGCCCATT GGGTAAATCT TCAATGCTCA AAGGAACTTC AATCGTTCCA 12420

ACACCGGCAT CTGTTAGGTC AGCAGTAACC TTGAATTTAC GTGTACTTTC TTGCATTTCA 12480

CTAGCTAGCG ATAGGCGATT TGCACCAGTC AAGACCACTG ATACTTCTGA AGCAAAACCG 12540

CTAATAAAAT ACTTATCACT ATTATAGCGT ATGTCAATAG GGACATTTGT TACTGTATTA 12600

GTATAGGTTT CCGTTTTTAC CTGCCTAGCA CTGGTACTGT TTTGAAAATT CGTCGCCGTA 12660

GCATAGACAA ATAAGACACA AGCAAAAAAG AGTGAGGATA TGATATATAA ACTATTTTTT 12720

TTCATGTTTC CATCCTCCTA GCAATCGTTC TTTAAAACTA AGACCCACTT CCTCTTTTGG 12780

AAGTAAGATT TCACGTAATT CTGTTTCAAA TTCATCAAGT GTTAGGTTGT GCTTAAACCT 12840

TCCATTATAG GTTATCGAAA TTCCTCCCGT TTCCTCTGAT ACGACAAAAG TCAAGGCATC 12900

TGAGACTTCT GATAAACCGA TAGCCGCCCG GTGTCTGGTC CCAAATTCCT TGGAAATCCC 12960

TGTGTTTTTT GTCAAGGGCA GATAGGCAGA CGTCACAGCG ATACGTTCTT CTTTGATAAT 13020

CACCGCACCA TCATGTAGGG GAGTGTTGGG AATAAAAATG TTAATGAGAA GTTCTGCAGA 13080

AATCTTAGCA TCCAAGGGAA TTCCTGTCGA AATATACTCC TGCAAGGTAC GTACACGCTG 13140

AATAGCAACC AAGGCCCCGA TTTTACGAGG ACTCATGTAT TCAACAGACT TAACAAAGGC 13200

ACGAATCATC TGTTCCTCAG CACTAATAGG GGCATTGGAA AAGAAATCTG TCGCTCTTCC 13260

CAAACGTTCC AAACCAGTCC GAATCTCTGG AGAGAAGATA ACAACCGCCG CAATAACCCC 13320

ATAAGTAATA ATTTGATTGA TTAACCAAGA AATCGTAGTC AAACCAATCA TATTTGCAAG 13380

GATTTGAGCT AAAATAAACA CCAAAACTCC ACGTACCAAA ATCATAATCT TGGTTCCTGC 13440

AATAGCTTTT GTAAAATGGT ATAAAATATA AGCAACAATC AAAATATCAA TCAGATTGAT 13500

AGCTATCGTC CATGGACTTG CAAACAAACT GGTCCAATAT TGCAGATTGG ATAATTGTTG 13560

AAAATTCATC CCTGATATCC TCCCTATCAA AACACTTTCG TCCTATTATA CCATTTTCTG 13620

GCATTTTTTT CCCTATCCTA GTCCATTTTA CATTGAACAA AAATATGATA AAATAAACTG 13680

ACTAAAAAAA ACAAAGGAGA AACTATGTCT CAACTCTATG ATATTACCAT TGTGGGTGGT 13740

GGTCCTGTCG GGCTTTTTGC AGCCTTTTAT GCCCACCTAC GCCAAGCCAA GGTTCAAATC 13800

ATCGACTCTC TTCCCCAGCT AGGTGGACAA CCTGCTATTC TCTACCCTGA AAAGGAAATC 13860

CTAGACGTAC CAGGCTTCCC AAACCTGACT GGAGAAGAGT TGACTAACCG CTTGATTGAA 13920

CAGCTAAATG GATTTGATAC CCCTATTCAT CTCAATGAAA CGGTTCTTGA GATTGACAAA 13980

CAAGAAGAAT TTGCCATCAC AACTTCTAAA GGAAGTCACC TGACTAAAAC AGTTATCATC 14040

GCTATGGGTG GCGGTGCCTT CAAACCACGT CCGCTGGAAC TTGAAGGGGT TGAGGGCTAT 14100

GAAAATATCC ACTACCACGT TTCTAACATT CAGCAATACG CTGGTAAGAA AGTGACGATT 14160

CTTGGTGGGG GAGACTCGGC TGTGGATTGG GCTTTGGCTT TTGAAAAAAT CGCACCAACT 14220

ACCCTTGTTC ACCGCAGAGA TAATTTCCGT GCCTTGGAAC ACAGTGTTCA AGCCTTGCAA 14280

GAATCATCTG TAACCATCAA GACACCATTC GCCCCTAGCC AACTCCTTGG AAATGGAAAA 14340

ACACTTGATA AACTTGAAAT CACAAAAGTC AAATCTGATG AAACTGAAAC CATTGACCTA 14400

GACCACCTCT TTGTCAACTA TGGTTTCAAA TCTTCTGTCG GTAACCTTAA AAACTGGGGG 14460

CTCGACCTCA ACCGTCACAA GATTATCGTC AACAGCAAAC AGGAATCCAG CCAAGCAGGT 14520

ATCTATGCTA TCGGTGACTG CTGCTACTAT GACGGAAAAA TTGATCTGAT TGCGACAGGC 14580

CTCGGAGAAG CTCCAACTGC TGTCAACAAC GCTATCAACT ACATTGACCC TGAACAAAAA 14640

GTACAACCAA AACACTCTAC TAGTTTATAA AAAAGAACCA CGAGTCACAT AGGATTCGTG 14700

GTTTTATAAT TCATCCGCTA TCTTATTGAT TTTTCTGAGT CTGTGATTGA CACCACTTTT 14760

GGTCAGAGGG GTGCTGAGAC TATCTGCTAA CTGCTGGATA GAGTAGTCTG GGTGCTGAAT 14820

CCTCAGTTGC GCCACTTCCT GCAAATCTAC TGGCAAATTT TCTAAGCCCA TGATATCTTT 14880

GATTTTACTG ATATTGTTAA TGGTCTTCAT GCTGGCAGAA ACTGTCCGAG CGATATTAGC 14940

TGTCTCGGCA TTATTAGCCC GATTGAGGTC GTTACGGGTT TCTCGCAAAA TCTTAACCCG 15000

CTCAAAATCA TCACGTGCCT GCATGGCTCC TATTACTATC AAGAAGTCCA TAATGTCTTC 15060

TGCTCGCTGG AGATAGGTCA CAGCCCCCTT CTTGCGCTCA AGCACCTTGG CATCCAGTAA 15120

AAACTGTTGG AGAAGGGAGG CAATTCCTTG CGCGTGGTCC AGATAAACAG AACTGATTTC 15180